Appendix 11: Safety data sheets

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **NALCO® 2584**
Substance type: CLP Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Use of the Substance/Mixture : pH CONTROL

Identified uses : Boiler treatment under 1T per day

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

Company : Nalco Ltd.
P.O. BOX 11, WINNINGTON AVENUE
NORTHWICH, CHESHIRE, U.K. CW8 4DX
+44 (0)1606 74488
For Product Safety information please contact:
msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : +44 1618841235
+32-(0)3-575-5555 Trans-European

Date of Compilation/Revision: 10.02.2020
Version Number: 2.4

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1	H290
Skin corrosion, Category 1	H314
Serious eye damage, Category 1	H318

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**
P234 Keep only in original packaging.
P280 Wear protective gloves/ protective clothing/

eye protection/ face protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:
Sodium Hydroxide
Potassium Hydroxide

2.3 Other hazards

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Sodium Hydroxide	1310-73-2 215-185-5 01-2119457892-27	Skin corrosion Category 1A; H314 Corrosive to metals Category 1; H290	30 - < 50
Potassium Hydroxide	1310-58-3 215-181-3 01-2119487136-33	Acute toxicity Category 4; H302 Skin corrosion Category 1A; H314 Corrosive to metals Category 1; H290	10 - < 20

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled : Remove to fresh air.
Treat symptomatically.
Get medical attention if symptoms occur.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Use a mild soap if available.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Get medical attention immediately.

In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
If swallowed	:	Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, give 2 glasses of water. Get medical attention immediately.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Not applicable.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only.

Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Flush away traces with water.
For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : Do not ingest. Do not breathe spray, vapour. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep only in original container. Absorb spillage to prevent material damage.

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Nylon, Hastelloy C-276, Plexiglass, Kalrez, EPDM, Alfax, PVC, Teflon, Buna-N, HDPE (high density polyethylene), Hypalon, Polypropylene, Polyethylene, Stainless Steel 304, Stainless Steel 316L

Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Copper, Brass, Natural rubber, Polyurethane, Viton, Neoprene, Aluminum, Ethylene propylene, Mild steel

7.3 Specific end uses

Specific use(s) : pH CONTROL

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium Hydroxide	1310-73-2	STEL	2 mg/m3	UKCOSSTD
Potassium Hydroxide	1310-58-3	STEL	2 mg/m3	UKCOSSTD

DNEL

Sodium Hydroxide	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1 mg/m3
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1 mg/m3
Potassium Hydroxide	:	End Use: Workers Exposure routes: Inhalation Value: 1 mg/m3
		End Use: Consumers Exposure routes: Inhalation Value: 1 mg/m3

8.2 Exposure controls

Appropriate engineering controls

Effective exhaust ventilation system.
Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.Remove and wash contaminated clothing before re-use.Wash face, hands and any exposed skin thoroughly after handling.Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles
Face-shield

Hand protection (EN 374) : Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605)	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes
Respiratory protection (EN 143, 14387)	:	When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type: P

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Environmental exposure controls

General advice	:	Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Liquid
Colour	:	colourless
Odour	:	odourless
Flash point	:	does not flash
pH	:	14, 5 % Method: ASTM E 70
Odour Threshold	:	no data available
Melting point/freezing point	:	Freezing Point: -23 °C
Initial boiling point and boiling range	:	145 °CMethod: ASTM D 86
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	0.5 mm Hg (37.7 °C)
Relative vapour density	:	no data available
Relative density	:	1.5 - 1.53 (20 °C)
Solubility(ies)		
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available

Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

10.5 Incompatible materials

Materials to avoid : Mild steel
Aluminium

10.6 Hazardous decomposition products

Hazardous decomposition products : Not applicable.

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate : > 2,000 mg/kg
Acute inhalation toxicity	:	There is no data available for this product.
Acute dermal toxicity	:	There is no data available for this product.
Skin corrosion/irritation	:	There is no data available for this product.

Serious eye damage/eye irritation	:	There is no data available for this product.
Respiratory or skin sensitization	:	There is no data available for this product.
Carcinogenicity	:	There is no data available for this product.
Reproductive effects	:	There is no data available for this product.
Germ cell mutagenicity	:	There is no data available for this product.
Teratogenicity	:	There is no data available for this product.
STOT - single exposure	:	There is no data available for this product.
STOT - repeated exposure	:	There is no data available for this product.
Aspiration toxicity	:	There is no data available for this product.

Components

Acute oral toxicity	:	Potassium Hydroxide LD50 rat: 333 mg/kg

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns.
Ingestion	:	Causes digestive tract burns.
Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough
Further information	:	no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Product

Environmental Effects	:	This product has no known ecotoxicological effects.
Toxicity to fish	:	96 hrs LC50 Oncorhynchus mykiss (rainbow trout):

3,980 mg/l
Test substance: Product
GLP: no

96 hrs NOEC Oncorhynchus mykiss (rainbow trout):
2,500 mg/l
Test substance: Product
GLP: no

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to daphnia and other aquatic invertebrates : Sodium Hydroxide
48 h EC50: 40 mg/l

12.2 Persistence and degradability

Product

Biodegradation Assessment : The product does not contain any organic substances.

Biological Oxygen Demand (BOD): 0 mg/l (Product)

Chemical Oxygen Demand (COD): 140 mg/l (Product)

Components

Biodegradability : Sodium Hydroxide
Result: Not applicable - inorganic

Potassium Hydroxide
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

Product

Bioaccumulation : This preparation or material is not expected to bioaccumulate.

Components

Bioaccumulation : Sodium Hydroxide
study scientifically unjustified

: Potassium Hydroxide
study scientifically unjustified

12.4 Mobility in soil

Product

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition

between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;,<5%,30 - 50%,50 - 70%,The portion in water is expected to be soluble or dispersible.

12.5 Results of PBT and vPvB assessment

Product

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
Guidance for Waste Code selection	:	Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number:	UN 1719
14.2 UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (Sodium Hydroxide, Potassium Hydroxide)

14.3 Transport hazard class(es):	8
14.4 Packing group:	II
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Air transport (IATA)

14.1 UN number:	UN 1719
14.2 UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (Sodium Hydroxide, Potassium Hydroxide)
14.3 Transport hazard class(es):	8
14.4 Packing group:	II
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number:	UN 1719
14.2 UN proper shipping name:	CAUSTIC ALKALI LIQUID, N.O.S. (Sodium Hydroxide, Potassium Hydroxide)
14.3 Transport hazard class(es):	8
14.4 Packing group:	II
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

INTERNATIONAL REGULATIONS

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act
When use situations necessitate compliance with FDA regulations, this product is acceptable under: 21 CFR 173.310 Boiler Water Additives

Limitations: no more than required to produce intended technical effect. Steam produced may be used in contact with any food type, defined under 21 CFR 170.3, which includes milk or milk products.

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds):
NSF Registration number for this product is: 136513
This product is acceptable as a compound for the treatment of entire potable water systems (G1) in official establishments in and around food processing areas. This product is acceptable for treatment of cooling and retort water (G5) in and around food processing areas. This product is acceptable for treating boilers or steam lines where steam produced may contact edible products and/or cooling systems where the treated water may not contact edible products in and around food processing areas (G6).

INTERNATIONAL CHEMICAL CONTROL LAWS

CANADA
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

United States TSCA Inventory
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

15.2 Chemical Safety Assessment:

A Chemical Safety Assessment has been carried out for some of the substances in this mixture.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Corrosive to metals 1, H290	Calculation method
Skin corrosion 1, H314	Based on product data or assessment
Serious eye damage 1, H318	Based on product data or assessment

Full text of H-Statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; ECx – Concentration associated with x% response; ELx – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErCx – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO – International Maritime Organization; ISHL – Industrial Safety and Health Law (Japan); ISO – International Organisation for Standardization; KECI – Korea Existing Chemicals Inventory; LC50 – Lethal Concentration to 50 % of a test population; LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL – International Convention for the Prevention of Pollution from Ships; n.o.s. – Not Otherwise Specified; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; NZIoC – New Zealand Inventory of Chemicals; OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS – Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR – (Quantitative) Structure Activity Relationship; REACH – Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet : IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

The possible key literature references and data sources which may have been used in conjunction with the consideration of

expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERIcards, Non European official regulatory data and other data sources.

Prepared By : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Annex: Exposure Scenarios

Exposure Scenario: Boiler treatment under 1T per day

Life Cycle Stage	:	Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sector of use	:	**SU23**	Electricity, steam, gas water supply and sewage treatment

Contributing scenario controlling environmental exposure for:

Environmental release category	:	**ERC4**	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	:	1000 kg	
Type of Sewage Treatment Plant	:	none	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC15**	Use as laboratory reagent
Exposure duration	:	60.00 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation with 90% efficiency is required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	Yes: See Section 8	
Respiratory Protection	:	No	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC1**	Use in closed process, no likelihood of exposure
Exposure duration	:	60 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	Yes: See Section 8	
Respiratory Protection	:	No	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC8a**	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	:	15 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	Yes: See Section 8	
Respiratory Protection	:	No	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC28**	Manual maintenance (cleaning and repair) of machinery
Exposure duration	:	240 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	Yes: See Section 8	
Respiratory Protection	:	No	

SAFETY DATA SHEET

PRODUCT

NexGuard® 22310

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **NexGuard® 22310**

APPLICATION : BOILER WATER INTERNAL TREATMENT

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 0 / 1 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme * = Chronic Health Hazard

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause irritation with prolonged contact.
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Use a mild soap if available.
Wear suitable protective clothing.
Not flammable or combustible. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) and sulfur (SOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. There may be irritation to the gastro-intestinal tract with nausea and vomiting.

INHALATION :
Not a likely route of exposure. Repeated or prolonged exposure may irritate the respiratory tract.

AGGRAVATION OF EXISTING CONDITIONS :
A review of available data does not identify any worsening of existing conditions.

HUMAN HEALTH HAZARDS - CHRONIC :
No adverse effects expected other than those mentioned above.

4. FIRST AID MEASURES

EYE CONTACT :
Immediately flush with plenty of water for at least 15 minutes. If symptoms develop, seek medical advice.

SKIN CONTACT :
Flush with large amounts of water. Use soap if available. If symptoms develop, seek medical advice.

INGESTION :
Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :
Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : None

EXTINGUISHING MEDIA :
This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :
Not flammable or combustible. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) and sulfur (SOx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Keep people away from and upwind of spill/leak. Ventilate spill area if possible.

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

7. HANDLING AND STORAGE

HANDLING :
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled.

STORAGE CONDITIONS :
Protect product from freezing. Store the containers tightly closed. Store in suitable labeled containers.

SUITABLE CONSTRUCTION MATERIAL :
PVC, Stainless Steel 304, EPDM, Buna-N, HDPE (high density polyethylene), Polyurethane, Neoprene, Polypropylene, Polyethylene, Stainless Steel 316L, 100% phenolic resin liner, Chlorosulfonated polyethylene rubber, Fluoroelastomer, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

UNSUITABLE CONSTRUCTION MATERIAL :
Brass, Mild steel, Epoxy phenolic resin

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :
This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :
General ventilation is recommended. Use local exhaust ventilation if necessary to control airborne mist and vapor.

RESPIRATORY PROTECTION :
Where concentrations in air may exceed the limits given in this section or when significant mists, vapors, aerosols, or dusts are generated, an approved air purifying respirator equipped with suitable filter cartridges is recommended. Consult the respirator / cartridge manufacturer data to verify the suitability of specific devices. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory

protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :
When handling this product, the use of chemical gloves is recommended. The choice of work glove depends on work conditions and what chemicals are handled. Please contact the PPE manufacturer for advice on what type of glove material may be suitable. Gloves should be replaced immediately if signs of degradation are observed.

SKIN PROTECTION :
Wear standard protective clothing.

EYE PROTECTION :
Wear safety glasses with side-shields.

HYGIENE RECOMMENDATIONS :
Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

HUMAN EXPOSURE CHARACTERIZATION :
Based on our recommended product application and personal protective equipment, the potential human exposure is: Moderate

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Fluorescent Orange Yellow
ODOR	Normally None, however residual ammonia may be present in headspace of newly opened containers

SPECIFIC GRAVITY	1.19 @ 77 °F / 25 °C
DENSITY	9.9 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	10.5
FREEZING POINT	22 °F / -6 °C
VAPOR PRESSURE	Same as water
VOC CONTENT	0 % Calculated

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Freezing temperatures.

MATERIALS TO AVOID :
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :
Based on our hazard characterization, the potential human hazard is: Low

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	7,070 mg/l	Product
Fathead Minnow	96 hrs	1,086 mg/l	Product
Inland Silverside	96 hrs	> 5,000 mg/l	Product

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	1,650 mg/l		Product
Mysid Shrimp (Mysidopsis bahia)	96 hrs	> 5,000 mg/l		Product

AQUATIC PLANT RESULTS :

Species	Exposure	EC50/LC50	Test Descriptor
Algae	72 hrs	10 mg/l	

PERSISTENCY AND DEGRADATION :

Total Organic Carbon (TOC) : 87,000 mg/l

Chemical Oxygen Demand (COD) : 240,000 mg/l

Biological Oxygen Demand (BOD) :

Incubation Period	Value	Test Descriptor
5 d	6,200 mg/l	Product

The organic portion of this preparation is expected to be poorly biodegradable.

MOBILITY :
The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	30 - 50%	50 - 70%

The portion in water is expected to be soluble or dispersible.

BIOACCUMULATION POTENTIAL
This preparation or material is not expected to bioaccumulate.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: Low
Based on our recommended product application and the product's characteristics, the potential environmental exposure is: Moderate

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

CERCLA/SUPERFUND, 40 CFR 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :
When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 173.310 Boiler Water Additives

The following limitations apply:

Maximum dosage	Limitation
1000 PPM	as product in the boilerwater

The polymer must not be used at pressures above 1,000 PSIG (6895 kPa).

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds) :
NSF Registration number for this product is : 121221
This product is acceptable for use in meat, poultry, and other food processing areas as a Boiler Treatment Product (G6), for treating boiler and steam lines where the steam produced may contact edible products. Acceptable usage shall be in accordance with the dosage limitations specified on the product label.

This product has been certified as KOSHER/PAREVE for year-round use INCLUDING THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :
This product may contain trace levels (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
• Sodium Hydroxide	Sec. 311

CLEAN AIR ACT, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

CALIFORNIA PROPOSITION 65 :
Substances listed under California Proposition 65 are not intentionally added or expected to be present in this product.

MICHIGAN CRITICAL MATERIALS :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

STATE RIGHT TO KNOW LAWS :
The following substances are disclosed for compliance with State Right to Know Laws:

Sodium Sulfate	7757-82-6

INTERNATIONAL CHEMICAL CONTROL LAWS :

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

AUSTRALIA
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on the Inventory of Existing Chemical Substances China (IECSC).

EUROPE
The substance(s) in this preparation are included in or exempted from the EINECS or ELINCS inventories

JAPAN
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

KOREA
This product contains substance(s) which are not in compliance with the Toxic Chemical Control Law (TCCL) and may require additional review.

NEW ZEALAND
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

PHILIPPINES
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

16. OTHER INFORMATION

Nalco Internal Number F105654

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's

general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: Low

* The environmental risk is: Low

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight™ (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 02/17/2011
Version Number : 2.2

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **NALCO® 77211**
Substance type: CLP Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Use of the Substance/Mixture : OXYGEN SCAVENGER

Identified uses : Boiler treatment under 1T per day

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

Company : Nalco Ltd.
NORTHWICH, CHESHIRE, U.K. CW8 4DX
+44 (0)1606 74488
For Product Safety information please contact:
msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : +44 1618841235
+32-(0)3-575-5555 Trans-European

Date of Compilation/Revision: 29.01.2021
Version Number: 1.9

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Warning

Hazard Statements	:	H302	Harmful if swallowed.
Supplemental Hazard Statements	:	EUH031	Contact with acids liberates toxic gas.
Precautionary Statements	:	**Prevention:**	
		P264	Wash skin thoroughly after handling.
		P270	Do not eat, drink or smoke when using this product.

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:	
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
Storage:	
P405	Store locked up.

Hazardous components which must be listed on the label:
Sodium BisulfiteCobalt Sulfate

2.3 Other hazards

The head space of containers containing this product may accumulate Sulphur Dioxide (SO2). SO2 is a toxic and irritating gas that can be hazardous if inhaled.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Sodium Bisulfite	7631-90-5 231-548-0 01-2119524563-42	Nota B Acute toxicity Category 4; H302 Corrosive to metals Category 1 5 - 100 %	30 - < 50
Cobalt Sulfate	10124-43-3 233-334-2 01-2119517426-41	Note 1 Acute toxicity Category 4; H302 Respiratory sensitization Category 1; H334 Skin sensitization Category 1; H317 Germ cell mutagenicity Category 2; H341 Carcinogenicity Category 1B; H350i Reproductive toxicity Category 1B; H360F Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410 Carcinogenicity Category 1B H350i >= 0.01 % M = 10 M(Chronic) = 10	0.01 - < 0.1

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled	:	Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth.

Get medical attention if symptoms occur.

Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Heating or fire can release toxic gas. May evolve oxides of sulfur (SOx) under fire conditions. Exposure to decomposition products may be a hazard to health.
Hazardous combustion products	:	Not applicable.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions	:	Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible

absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Flush away traces with water.
For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : Do not ingest. Wash hands thoroughly after handling. Use only with adequate ventilation. Containers should be opened cautiously and only in well ventilated areas.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep out of reach of children. Keep container tightly closed. Store in a well-ventilated place. Store in suitable labelled containers. Do not store at elevated temperature.

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Brass, EPDM, HDPE (high density polyethylene), Neoprene, Polyurethane, Plasite 4300, CPVC (rigid), Polypropylene (rigid), Polyethylene (rigid), Chlorosulfonated polyethylene rubber, Fluoroelastomer

Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Buna-N, Plasite 7122, Stainless Steel 304, coated steel

7.3 Specific end uses

Specific use(s) : OXYGEN SCAVENGER

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium Bisulfite	7631-90-5	TWA	5 mg/m3	UKCOSSTD
Cobalt Sulfate	10124-43-3	TWA	0.1 mg/m3 (Cobalt(Co))	UKCOSSTD
Further information	Sen	Capable of causing occupational asthma.		
	Carc	Capable of causing cancer and/or heritable genetic damage.		

DNEL

Sodium Bisulfite	:	End Use: Workers Exposure routes: Inhalation Potential health effects: long term - systemic Value: 246 mg/m3

PNEC

Sodium Bisulfite	:	Fresh water Value: 1.09 mg/l
		Marine water Value: 0.11 mg/l
		STP Value: 82.5 mg/l

8.2 Exposure controls

Appropriate engineering controls

Effective exhaust ventilation system.
Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.Remove and wash contaminated clothing before re-use.Wash face, hands and any exposed skin thoroughly after handling.

Eye/face protection (EN 166) : Safety glasses

Hand protection (EN 374) : Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.3 mm for nitrile rubber 0.2 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Wear suitable protective clothing.

Respiratory protection (EN 143, 14387) : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Filter type: P

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Environmental exposure controls

General advice : Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Liquid
Colour	:	amber
Odour	:	Sulfurous
Flash point	:	does not flash
pH	:	3.0 - 5.0, 100 % (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	Freezing Point: -7 °C
Initial boiling point and boiling range	:	100 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	32 mm Hg (28 °C)
Relative vapour density	:	no data available
Relative density	:	1.31 (25 °C)
Density	:	1.29 g/cm3
Solubility(ies)		
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity		
Viscosity, dynamic	:	6 mPa.s (20 °C)
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Evolves SO2 when open to atmosphere. The rate of SO2 evolution increases with temperature and/or transfer of product.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid	:	Keep away from heat and sources of ignition.

10.5 Incompatible materials

Materials to avoid	:	Bases Contact with strong alkalies (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. Contains Sulfite. SO2 may react with vapors from neutralizing amines and may produce a visible cloud of amine salt particles. SO2 may react with vapors from neutralizing amines and may produce a visible cloud of amine salt particles.

10.6 Hazardous decomposition products

Hazardous decomposition products	:	Not applicable.

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate : 1,324 mg/kg
Acute inhalation toxicity	:	There is no data available for this product.
Acute dermal toxicity	:	LD50 rabbit: > 3,038 mg/kg Test substance: Product
Skin corrosion/irritation	:	There is no data available for this product.
Serious eye damage/eye irritation	:	There is no data available for this product.

Respiratory or skin sensitization	:	There is no data available for this product.
Carcinogenicity	:	There is no data available for this product.
Reproductive effects	:	There is no data available for this product.
Germ cell mutagenicity	:	There is no data available for this product.
Teratogenicity	:	There is no data available for this product.
STOT - single exposure	:	Based on available data, the classification criteria are not met.
STOT - repeated exposure	:	There is no data available for this product.
Aspiration toxicity	:	No aspiration toxicity classification

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Harmful if swallowed.
Inhalation	:	May release toxic, irritating and/or corrosive gases.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No information available.
Inhalation	:	No symptoms known or expected.
Further information	:	no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product

Environmental Effects	:	This product has no known ecotoxicological effects.
Toxicity to fish	:	96 hrs LC50 Lepomis macrochirus (Bluegill sunfish): 100 - 1,000 mg/l Test substance: Product 96 hrs LC50 Oncorhynchus mykiss (rainbow trout): 100 - 1,000 mg/l

Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to fish : Sodium Bisulfite
96 h LC50 Fish: 177.8 mg/l

12.2 Persistence and degradability

Product

Biodegradability : Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Chemical Oxygen Demand (COD): 75,000 mg/l

Components

Biodegradability : Sodium Bisulfite
Result: Not applicable - inorganic

Cobalt Sulfate
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

Product

Bioaccumulation : This preparation or material is not expected to bioaccumulate.

12.4 Mobility in soil

Product

This substance is water soluble and is expected to remain primarily in water.

12.5 Results of PBT and vPvB assessment

Product

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
Guidance for Waste Code selection	:	Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number:	UN 2693
14.2 UN proper shipping name:	BISULPHITES, AQUEOUS SOLUTION, N.O.S. (Sodium Bisulfite)
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Air transport (IATA)

14.1 UN number:	UN 2693
14.2 UN proper shipping name:	BISULPHITES, AQUEOUS SOLUTION, N.O.S. (Sodium Bisulfite)
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number:	UN 2693
14.2 UN proper shipping name:	BISULPHITES, AQUEOUS SOLUTION, N.O.S. (Sodium Bisulfite)
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	No special precautions required.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors This product is regulated (containing reportable or/and restricted substances) by Regulation (EU) 2019/1148 (explosives precursors): all suspicious transactions, significant disappearances and thefts should be reported to the relevant national contact point.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	:	Not applicable. Not applicable.

INTERNATIONAL REGULATIONS

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act
When use situations necessitate compliance with FDA regulations, this product is acceptable under: 21 CFR 173.310 Boiler Water Additives

Limitations: no more than required to produce intended technical effect. Steam produced may be used in contact with any food type, defined under 21 CFR 170.3, which includes milk or milk products.

KOSHER
This product has been certified as KOSHER/PAREVE for year-round use EXCEPT FOR THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds):
NSF Registration number for this product is: 141486
This product is acceptable for treating boilers or steam lines where steam produced may contact edible products and/or cooling systems where the treated water may not contact edible products in and around food processing areas (G6).

INTERNATIONAL CHEMICAL CONTROL LAWS

CANADA
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

United States TSCA Inventory
On TSCA Inventory

NATIONAL REGULATIONS GERMANY

Water contaminating class (Germany)	:	WGK 1

FEDERAL INSTITUTE FOR RISK ASSESSMENT (BfR) RECOMMENDATION
Acceptable Sections: LFGB compliant

15.2 Chemical Safety Assessment:

A Chemical Safety Assessment has been carried out for the substance(s) that makes/make up this material or for the material itself.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Acute toxicity 4, H302	Calculation method

Full text of H-Statements

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; ECx – Concentration associated with x% response; ELx – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErCx – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO – International Maritime Organization; ISHL – Industrial Safety and Health Law (Japan); ISO – International Organisation for Standardization; KECI – Korea Existing Chemicals Inventory; LC50 – Lethal Concentration to 50 % of a test population; LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL – International Convention for the Prevention of Pollution from Ships; n.o.s. – Not Otherwise Specified; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; NZIoC – New Zealand Inventory of Chemicals; OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS – Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR – (Quantitative) Structure Activity Relationship; REACH – Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet	:	IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERIcards, Non European official regulatory data and other data sources.

Prepared By : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Annex: Exposure Scenarios

Exposure Scenario: Boiler treatment under 1T per day

Life Cycle Stage	:	Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sector of use	:	**SU23**	Electricity, steam, gas water supply and sewage treatment

Contributing scenario controlling environmental exposure for:

Environmental release category	:	**ERC4**	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	:	1000 kg	
Type of Sewage Treatment Plant	:	none	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC15**	Use as laboratory reagent
Exposure duration	:	60.00 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation with 90% efficiency is required	
General ventilation		Ventilation rate per hour: 1	
Skin Protection	:	see section 8	

Respiratory Protection	:	see section 8

Contributing scenario controlling worker exposure for:

Process category	:	**PROC1** Use in closed process, no likelihood of exposure
Exposure duration	:	60 min
Operational conditions and risk management measures	:	Indoor
		Local Exhaust Ventilation is not required
General ventilation		Ventilation rate per hour: 1
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

Contributing scenario controlling worker exposure for:

Process category	:	**PROC8a** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	:	15 min
Operational conditions and risk management measures	:	Indoor
		Local Exhaust Ventilation is not required
General ventilation		Ventilation rate per hour: 1
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

Contributing scenario controlling worker exposure for:

Process category	:	**PROC28** Manual maintenance (cleaning and repair) of machinery
Exposure duration	:	240 min
Operational conditions and risk management measures	:	Indoor
		Local Exhaust Ventilation is not required
General ventilation		Ventilation rate per hour: 1
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

SAFETY DATA SHEET
ADHOL NO.10

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name ADHOL NO.10

Product number HLA17

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses CIP Additive For professional use only.

Uses advised against Not for direct contact with Food or Beverage stuffs. Not for oral consumption. Must not be used where Hypochlorite based chemicals (Bleach) are present.

1.3. Details of the supplier of the safety data sheet

Supplier UK - Holchem Laboratories Ltd. Gateway House, Pilsworth Road,
Bury, BL9 8RD
Tel : +44 (0) 1706 222288; e-mail info@holchem.co.uk
EU - Kersia Deutschland GmbH, Marie-Curie-Straße 23
53332 Bornheim - Sechtem

1.4. Emergency telephone number

Emergency telephone Emergency Information:-
For accidents and spillages involving this product that pose a threat to the environment, or human health, or require immediate first aid advice call:- +44(0) 1865 407333.
Note:- This number will not accept order queries or calls dealing with equipment breakdowns. This product is registered with the NPIS. UK Environment Agency 24hour Advisory Service 0800 807060. Irish Environmental Protection Agency 1890 335599 (This is a Lo Call Number) This product is registered with the Irish National Poison Centre (NPIC at Beaumont Hospital - Dublin). The Poison Centre can be contacted between 8am and 10pm, telephone +00353 1 8092566.

Shelflife In Months 12

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger

ADHOL NO.10

Hazard statements	H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.
Precautionary statements	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/ attention. P501 Dispose of contents/ container in accordance with national regulations.
Contains	HYDROGEN PEROXIDE SOLUTION ... %
Detergent labelling	≥ 30% oxygen-based bleaching agents
Supplementary precautionary statements	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROGEN PEROXIDE SOLUTION ... % **30-<45%**

CAS number: 7722-84-1 | EC number: 231-765-0 | REACH registration number: 01-2119485845-22

Classification
Ox. Liq. 1 - H271
Acute Tox. 4 - H302
Acute Tox. 4 - H332
Skin Corr. 1A - H314
Eye Dam. 1 - H318
STOT SE 3 - H335

The full text for all hazard statements is displayed in Section 16.

Composition comments To the best of our knowledge, all of the substances used in this product are being supported for the relevent application in REACH. Note:- From annex VI of CLP directive, supplementary classification of H412 - Hazardous to the aquatic environment - has also been considered. This on the basis of supplier information.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information For immediate First Aid advice in the UK, dial 111. When it is safe to do so, remove victim immediately from source of exposure. However, consideration should be given as to whether moving the victim will cause further injury.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Get medical attention if any discomfort continues.

ADHOL NO.10

Ingestion Do not induce vomiting. Rinse mouth thoroughly with water. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention.

Skin contact Remove contaminated clothing that is not stuck to the skin. Flush area with clean water. Get medical attention if any discomfort continues.

Eye contact Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. There is potential for loss of eye site. Rinsing and medical attention is essential.

4.2. Most important symptoms and effects, both acute and delayed

General information Neat product may cause skin irritation and permanent damage to eyes. Dilute product may result in irritation to both. This product is designed to be used as an additive. It is essential to consider other substances that may also be present.

Inhalation May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Ingestion Unlikely route of exposure without deliberate abuse. May cause chemical burns in mouth and throat. If dilute chemical is ingested some soreness of the mouth, throat and GI tract may occur.

Skin contact Prolonged contact with neat chemical may result in skin redness, irritation, dermatitis or burns. Use solutions may cause mild irritation, especially to open cuts and abrasions.

Eye contact May result in permanent eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Rinse well with water to neutral pH. This product is used as an additive to Caustic solutions. Check if this is the case and consider potential chemical burns due to Sodium Hydroxide exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Oxygen. Non-combustible. Breakdown may release Oxygen to support combustion of surrounding materials. Emits oxygen easily and may cause fire or explosion if heated. Contact with flammables may cause fire or explosions Contact with Sodium Hypochlorite liberates toxic Chlorine Gas. Heating may result in over-pressurisation of containers leading to bursting and release of chemical.

5.3. Advice for firefighters

Protective actions during firefighting Protective clothing and respiratory protection should be worn when tackling fires involving this product. Control run-off water by containing and keeping it out of sewers and watercourses. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

ADHOL NO.10

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Avoid or minimise the creation of any environmental contamination.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Do not use textiles, saw dust or other combustible materials to dam or soak up spillages. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Reference to other sections See sections 8,12 & 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist. Read and follow manufacturer's recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep only in the original container in a cool, well-ventilated place. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Avoid contact with reducing agents. Store away from direct sunlight. Keep away from flammable and combustible materials. Avoid contact with reducing agents.

7.3. Specific end use(s)

Specific end use(s) Detergent, refer to Product Information Sheet for full details.

Usage description This product is suitable for cleaning food process plants, it is not suitable for direct food contact.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

HYDROGEN PEROXIDE SOLUTION ... % (CAS: 7722-84-1)

DNEL

Professional - Inhalation; Short term local effects: 3 mg/m³
Professional - Inhalation; Long term local effects: 1.4 mg/m³
Consumer - Inhalation; Short term local effects: 1.93 mg/m³
Consumer - Inhalation; Long term local effects: 0.21 mg/m³

PNEC

- Fresh water; 0.0126 mg/l
- marine water; 0.0126 mg/l
- Intermittent release; 0.0138 mg/l
- STP; 4.66 mg/l
- Sediment (Freshwater); 0.047 mg/kg
- Sediment (Marinewater); 0.047 mg/kg
- Soil; 0.0023 mg/kg

8.2. Exposure controls

Protective equipment



ADHOL NO.10

Appropriate engineering controls	Provide adequate general and local exhaust ventilation.
Personal protection	The PPE indicated above is not a COSHH assessment. It represents PPE that should be considered during the manufacture, distribution, use and final disposal stages of this product's life cycle. It is the responsibility of employers to conduct a COSHH/risk assessment to determine appropriate PPE levels. The information given below should be used to support this assessment. Where possible replace manual processes with automated or closed processes to minimise contact with the product.
Eye/face protection	The following protection should be worn: Full face visor or shield. Refer to EN Standard 166 to select appropriate level of protection.
Hand protection	Gloves must be impermeable and resistant to the product. Gloves should be replaced at the first sign of wear. The following are recommended:- Natural Rubber (latex). Material thickness 1mm. Breakthrough time >480MIN (DIN EN374). Butyl Rubber. Material thickness 0.7mm. Breakthrough time >480min (DIN EN374). Nitrile Rubber. Material thickness 0.33mm. Breakthrough time >480min (DIN EN374). Refer to Standard EN 374 and EN 16523
Other skin and body protection	Provide eyewash station. Wear suitable protective clothing as protection against splashing or contamination. Reference to EN 13832 and EN 943 is useful when selecting footwear and clothing.
Hygiene measures	Promptly remove non-impervious clothing that has become contaminated, provided it is not adhered to the skin. Wash contaminated clothing before reuse. Provide eyewash station and safety shower.
Respiratory protection	No specific recommendation made, but respiratory protection must be used if the general level exceeds the Workplace Exposure Limit. Suitable filter:- Type NO-P3, colour code blue-white. In the event of prolonged exposure self contained breathing apparatus is recommended. Consult EN 133.
Environmental exposure controls	Do not allow the substance to contaminate surface water/ground water. See points 6, 12 &13. Discharge of solutions into effluent systems (including municipal drains) or to surface water are expected to cause significant pH changes. Discharge of solutions should be carried out such that pH changes are minimised. Where necessary pH buffering measures should be adopted. Users of this product should consult local drainage and permitting authorities to ensure that any restrictions or discharge consents are adhered to.
General Health and Safety Measures.	The above requirements refer to the neat chemical. In-use solutions may have a lower classification, however, a full risk assessment should be carried out before handling any chemical(s). Risk assessments should refer to COSHH and any other relevant legislation or industry specific guidelines governing the use of chemicals. Risk assessments should consider hazards from chemicals used in conjunction with this product. This product is used as an additive to other products. It is essential to consult the msds for both products.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Odour	Pungent.
Odour threshold	No information available.
pH	pH (concentrated solution): 1 - 3 @ 20 Degrees C pH (diluted solution): 3.0 - 4.0 @1% solution
Melting point	< 0°C

ADHOL NO.10

Initial boiling point and range	114 Degrees C
Flash point	Not applicable. Contains no Flammable Components
Evaporation rate	Data lacking.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Data lacking.
Other flammability	Not applicable.
Vapour pressure	2.99 hPa at 25C
Vapour density	Not applicable.
Relative density	1.13 @20 Degrees C
Bulk density	Not applicable.
Solubility(ies)	Soluble in water.
Partition coefficient	Not applicable. Not technically practical for mixtures.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Data lacking.
Viscosity	1.8 mPas @ 0°C
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Has Oxidising Properties.

9.2. Other information

Refractive index	Not applicable.
Particle size	Not applicable.
Molecular weight	Not applicable.
Volatility	Not applicable.
Saturation concentration	Not applicable.
Critical temperature	Not applicable.
Volatile organic compound	Not applicable.
Explosive Properties	Not Classified as Explosive
Storage Temperature Range	-10 to +30 degrees C

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Not expected to react when correctly stored and used. Mixing with other chemicals may produce unexpected reactions.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. - See note 10.6.

ADHOL NO.10

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Ávoid contact with reducing agents, for example sodium metabilsulphite. Refer to section 10.1. Contact with combustible material may cause fire or explosions.
Contact with flammable material may cause fire or explosions.
Risk of explosion if heated under confinement.
Fire or intense heat may cause violent rupture or packages. Avoid contact with organic material, for example cardboard packaging, organic solvents and surfactant based detergents. Do not mix with Hypochlorite based chemicals, this will result in the generation of toxic chlorine gas.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid pressure build up, contamination by dust or combustible materials. Do not allow product to dry out. Do not expose to UV lighting or direct sunlight.

10.5. Incompatible materials

Materials to avoid Reacts violently with readily oxidisable organic materials, acids, alkalis, reducing agents and other oxidisers. Catalytically decomposed by heavy metals and their salts, enzymes and contaminants such as dirt or rust. Flammable/combustible materials.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxygen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 500.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 31.43

Skin sensitisation

Skin sensitisation No evidence of skin sensitisation for any component of this formulation.

Carcinogenicity

Carcinogenicity The components of this formulation will not be systemically available in the body under normal conditions of handling. As a consequence it is not expected to cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility The components of this formulation will not be systemically available in the body under normal conditions of use and handling. As a consequence it is not expected to be toxic to the reproductive system or developing foetus.

General information See section 4.2.

Inhalation May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Ingestion Causes burns. May cause internal injury.

Skin contact This product is strongly irritating. Prolonged contact may cause burns.

Eye contact May cause permanent eye injury.

SECTION 12: Ecological information

ADHOL NO.10

Ecotoxicity This product is classified as harmful to aquatic life. Normal use is not expected to pose a risk.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish This mixture is not classified as toxic to aquatic organisms.
Normal use of diluted product is unlikely to pose a risk.
See note 12.0.

12.2. Persistence and degradability

Persistence and degradability This product consists solely of inorganic materials for which biodegradation assessment is not applicable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to bioaccumulate.

Partition coefficient Not applicable. Not technically practical for mixtures.

12.4. Mobility in soil

Mobility The product contains substances which are water soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Do not mix with other chemicals.

Disposal methods Small volumes of use solution can be disposed of to sewers.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 2014

UN No. (IMDG) 2014

UN No. (ICAO) 2014

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Proper shipping name (IMDG) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Proper shipping name (ICAO) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Proper shipping name (ADN) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Transport hazard class(es)

ADR/RID class 5.1

ADHOL NO.10

ADR/RID label	5.1 & 8
IMDG class	5.1
ICAO class/division	5.1
ICAO subsidiary risk	8

Transport labels





14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	5.1-02
Emergency Action Code	2P
Hazard Identification Number (ADR/RID)	58

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	UK Adoption and Implementation of the UN Globally Harmonised System (GHS) on Classification and Labelling of Chemicals (GB CLP) and considers UK National REACH legislation.
EU legislation	European Regulation (EC) No 1272/2008 (as amended) on Classification, Labelling and Packaging of Substances and Mixtures. Also considered is the REACH Regulation (EC) No.1907/2006 (as amended).
Explosive Precursors	Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors: Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

15.2. Chemical safety assessment

Pcs Information

No chemical safety assessment has been carried out.

ADHOL NO.10

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

(EC) No. 1272/2008 : EU Regulation on Classification, Labelling and Packaging of Substances and Mixtures.
NPIS - National Poisons Information Service.
vPvB - Very Persistent, Very bioaccumulative.
PBT - Persistent, Bioaccumulative & Toxic.
REACH - Registration, Evaluation, Authorisation & restriction of CHemicals (Regulation EC 1907/2006).
DNEL - Derived No Effect Limit.
PNEC - Predicted No Effect Concentration.
COSHH - Control of Substances Hazardous to Health.
Industry - Refers in section 8 to application of the substance in an industrial process.
Professional - Refers in section 8 to application/use of the preparation/product in a skilled trade premises.

General information

This document is a Safety Data Sheet, NOT a CoSHH assessment. It is the customer's responsibility to conduct a full CoSHH assessment, taking into account the information held within this document along with other local factors considered in a risk assessment. The Risk and Hazard statements listed below are the full text of abbreviations used in this document. They are not the final classification, for this refer to section 2.

Revision comments

Amendment to the emergency phone number in Section 1.4.

Revision date

16/10/2021

Hazard statements in full

H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

REACH extended MSDS comments

REACH requires that persons handling chemicals should take the necessary risk management measures, in accordance with assessments from manufacturers and importers of chemical substances. The relevent recommendations must be passed along the supply chain. These assessments are generally reported in Exposure Scenarios.
Where Exposure Scenarios have been provided for substances used in this product, the relevent information is incorporated into the safety data sheet.

END OF SAFETY DATA SHEET

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

AGGRESS
Code: 00BL0

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1
Creation date : 22/11/22
Revision: 23/12/22
Print Date : 13/03/23

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: AGGRESS

UFI : W34H-K07W-0001-7EQT

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the product

ALKALINE DETERGENT
FOOD INDUSTRY
AGGRESS is a highly caustic, high retention foam detergent containing non EDTA sequesterants.

1.3. Details of the supplier of the safety data sheet

Company identification

Out of hours Emergency Telephone Number +44 (0) 1865 407333
UK - Holchem Laboratories Ltd. Gateway House, Pilsworth Road, Bury, BL9 8RD
Tel : +44 (0) 1706 222288; e-mail info@holchem.co.uk
EU - Kersia Deutschland GmbH, Marie-Curie-Straße 23
53332 Bornheim - Sechtem
Tel: +49 (0)222 790 820

For information regarding this safety data sheet, please contact :
regulatory@kersia-group.com

1.4. Emergency telephone number

Emergency phone number

Emergency direct number (24 hours a day, 7 days a week) : +44 1273 289451

CARECHEM 24
Tel. +44 1865 407333

For information or to report a poisoning incident contact The National Poisons Information Centre:
+353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week).
Healthcare Professionals:
+353 (1) 809 2566 (24 hour service)
NHS: 111

Safety Data Sheet compliant with Regulation (EU) 2020/878

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The mixture meets the classification criteria provided for under Regulation (EC) No 1272/2008.

Substance corrosive to metals - Category 1	H290: May be corrosive to metals.
Skin corrosion - Category 1A	H314: Causes severe skin burns and eye damage.
Serious damage to eyes - Category 1	H318: Causes serious eye damage.

2.2. Label elements

Labelling according to 1272/2008/EC Regulation:

Hazard pictograms(s) :



Signal word :
Danger

Contains : Sodium hydroxide

Hazard statement(s) :
H290: May be corrosive to metals.
H314: Causes severe skin burns and eye damage.

Precautionary statement(s) :
P234: Keep only in original packaging.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353 + P310: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable as this involves a mixture.

3.2. Mixtures

Chemical nature of the mixture : ALKALINE DETERGENT

Substance(s)	CAS number(s)	EINECS number(s)	index	No registration REACH	Classification according to Regulation (EC) 1272/2008	SCL M-factor ATE	Type
10% <= Sodium hydroxide <= 15%	1310-73-2	215-185-5	011-002-00-6	01-2119457892-27	Skin Corr. 1A H314 Met. Corr. 1 H290	C ≥ 5% Skin Corr. 1A H314 2% ≤ C < 5% Skin Corr. 1B H314 0.5% ≤ C < 2% Skin Irrit. 2 H315 Eye Irrit. 2 H319	(1)
1% <= Sodium (xylenes and 4-ethylbenzene)sulfonates <= 5%		701-037-1			Eye Irrit. 2 H319		(1)
1% <= Alcohols C12-C14, ethoxylates, sulphate, sodium salts <= 5%	68891-38-3	500-234-8		01-2119488639-16	Skin Irrit. 2 H315 Eye Dam. 1 H318 Aquatic Chronic 3 H412		(1)
1% <= Sodium Octanoate < 5%	1984-06-1	217-850-5			Skin Irrit. 2 H315 Eye Irrit. 2 H319		(1)
0.1% <= Alcohols, C12-16 < 1%	68855-56-1	272-490-6			Aquatic Acute 1 H400 Aquatic Chronic 1 H410	M Factor (Acute) 1 M Factor (Chronic) 1	(1)

Type
(1) : Substance classified as hazardous for health and/or the environment
(2) : Substance with an exposure limit at the work station.
Substance of very high concern candidate for the authorisation procedure:
(3) : Substance considered as PBT (persistent, bioaccumulable, toxic)
(4) : Substance considered as vPvB (very persistent, very bioaccumulable)
(5) : Substance considered as carcinogenic category 1A
(6) : Substance considered as carcinogenic category 1B
(7) : Substance considered as mutagenic category 1A
(8) : Substance considered as mutagenic category 1B
(9) : Substance considered as reprotoxic category 1A
(10) : Substance considered as reprotoxic category 1B

(11) : Substance considered as endocrine disrupter
(12) : Other substance considered hazardous to health or the environment
(N) : Nanomaterial

Full text of H- and EUH- phrases : see section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General indications:
Take the contaminated clothes and shoes off immediately. Wash them before wearing them again.
In case of faintness , get medical advice/attention. Show this safety data sheet to the doctor.

In the event of inhalation :
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.Immediately call a POISON CENTER or doctor/physician.
Put into practice respiratory help procedure if needed and get medical advice immediately.

In the event of contact with the skin :
Take off immediately all contaminated clothing.
Wash immediately with plenty of water for 15 minutes at least.
Immediately call a POISON CENTER or doctor/physician.

In the event of contact with the eyes :
Rinse at once with a soft stream of water for at least 15 minutes, eyes wide open.
Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

In the event of ingestion :
Rinse mouth.
Do NOT induce vomiting.
Get medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact : Corrosive : Causes severe burns.

Eye contact : Causes serious eye damage.

Ingestion : Can induce mouth and digestive tract irritation .

Inhalation : Aerosols can induce respiratory tracts irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treatments : Symptomatic treatment

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media :
Agents compatible with other products involved into fire.

Unsuitable extinguishing media :
None from our knowledge.

5.2. Special hazards arising from the substance or mixture

AGGRESS is non-flammable.
However, in contact with certain metals (aluminium, zinc, copper...), release of hydrogen whose mixtures with air are explosive.
The thermal decomposition can release/form:
Corrosive vapours

5.3. Advice for firefighters

Wear independent respiratory equipment and protective suit.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel :

Wear suitable protective clothing.
Evacuate non-essential staff and those not equipped with individual protection apparatus.

6.1.2. For emergency responders :

Evacuate the personnel to a safe location.
Keep people upwind and away from the location of the flow/leak.
Use personal protection equipment.

6.2. Environmental precautions

Intervention limited to trained staff.
Do not discharge the product directly to sewer or to environment.
Take as soon as possible all incompatible materials away.
Informing the authorities if the product penetrates in the sewers or in the waters of the public domain.

6.3. Methods and material for containment and cleaning up

Small spillage :
Absorb with an inert, non-combustible absorbent material, such as sand, earth, vermiculite or diatomaceous earth.

Large spillage :
Never return spills in original containers for re-use.
Keep in suitable, properly labelled and closed containers for disposal.
Mark out, soak up with an inert absorbant and pump in an emergency tank.

6.4. Reference to other sections

Respect protective measures presented at heading 8.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with skin, eyes and clothing.
Take off immediately all contaminated clothing.
Do not eat, drink or smoke in work area. Avoid projections during use.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Storage :

Keep only in the original container.
Keep container closed.
Keep in a clean, cool and well-ventilated place away from sources of heat and intense light.
Store at a temperature not exceeding 40°C.
Do not store below the point of freezing.

7.2.2. Packaging or wrapping materials :

High density polyethylene recommended.

7.3. Specific end use(s)

No other recommendation.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values :

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1
Creation date : 22/11/22
Revision: 23/12/22
Print Date : 13/03/23

Substance	CAS number	Country	Type	Value	Unit	Comments	source
Sodium hydroxide	1310-73-2	AUT	OEL 8h	2 inhalable aerosol	mg/m³		International limit values for chemical agents
			OEL Short term	4 inhalable aerosol	mg/m³		International limit values for chemical agents
		BEL	OEL 8h	2	mg/m³	M	International limit values for chemical agents
		CHE	OEL 8h	2 inhalable aerosol	mg/m³		International limit values for chemical agents
			OEL Short term	2 inhalable aerosol	mg/m³		International limit values for chemical agents
		DNK	OEL 8h	2	mg/m³		International limit values for chemical agents
			OEL Short term	2	mg/m³		International limit values for chemical agents
		ESP	OEL Short term	2	mg/m³		International limit values for chemical agents
		FRA	VLCT	2	mg/m³		MSDS supplier
			VLEP 8h	2	mg/m³	Valeur limite indicative	International limit values for chemical agents
			EMV (Exposure medium value) :	2	mg/m³		INRS
					ppm		INRS
		GBR	OEL Short term	2	mg/m³		International limit values for chemical agents
		HRV	OEL Short term	2	mg/m³		
		HUN	OEL 8h	2	mg/m³		International limit values for chemical agents
			OEL Short term	2	mg/m³		International limit values for chemical agents
		LVA	EMV (Exposure medium value) : 8h	0.5	mg/m³		
		POL	NDS 8h	0,5	mg/m³		International limit values for chemical agents
			NDSCh Short term	1	mg/m³		International limit values for chemical agents
			STEL	1	mg/m³		MSDS supplier
			TWA	0,5	mg/m³		MSDS supplier
		SVN	OEL	2	mg/m³	opomba: Y	Rules on the protection of workers against the risks related to exposure to chemicals at work in Slovenia (Official Gazette RS, št 100/01, 39/05, 53/07, 102/10, 43/11. ZVZD-1 in 38/15)
			STEL	1		opomba: Y	Rules on the protection of workers against the risks related to exposure to chemicals at work in Slovenia (Official Gazette RS, št 100/01, 39/05, 53/07, 102/10, 43/11. ZVZD-1 in 38/15)
		SWE	OEL 8h	1	mg/m³	Inhalable dust	International limit values for chemical agents

8.2. Exposure controls

According to the requirements of Directive 98/24 /EC, the employer is required to conduct a risk assessment and implement appropriate risks management measures.

* For any situation where the absence of risk is not proven, he must consider the substitution or reduction of risk by improving in priority processes used and collective protection measures. The effectiveness of the solutions implemented will be checked by measurement in comparison to the statutory limit values for substances defined in Section 8.1.

* If the risk remains after these corrective actions, he must always check by routinely measuring compliance with

regulatory OEL if they exist in section 8.1 and apply all the individual protective measures given in section 8.2.
* When formalized risk assessment indicates a low risk to workers' health, control of compliance with regulatory OEL may not be considered and all individual protection measures is not always mandatory.

8.2.1. Appropriate engineering controls :

Ensure adequate ventilation.
Apply the necessary technical measures to comply with the professional exposure limit values.

8.2.2. Individual protection measures, such as personal protective equipment :

Eye/face protection :
Use safety glasses or facial screen in conformity with the EN 166 standard.



Hand protection :
Use chemical resistant gloves approved to EN 374.
Examples of prefered materials for insulating gloves:
Permeation time >= 480 min
Butyl rubber.
PVC
Thickness: > 0.5 mm
Fluorinated rubber (Viton)
Nitrile rubber.
Thickness: > 0.3 mm



Skin protection :
Wear a protective coverall, at least type 4, EN 14605
To carry boots or shoes of protection to chemical resistance in conformity with the European standard INTO 345.



Respiratory protection :
To always carry a respiratory apparatus of protection approved if the limit of exposure in work environment is likely to be exceeded.
During use that causes vapours or aerosols to form, wear a half-mask compliant with standard EN 140 or a full mask compliant with standard EN 136 fitted with a filter (compliant with standard EN 143) of type:
P2: Particles, solid aerosols and liquids



Thermal hazards :
Not applicable

Health measures :
Safety shower and eye wash fountain near to workplace.
After using, wash systematically all personal protective equipment.
Handle in accordance with good industrial hygiene practices and the safety instructions.

8.2.3. Environmental exposure controls :
Do not discharge the product directly to sewer or to environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid
Colour	yellow to amber
Odour	Detergent
Odour threshold	Not available
Freezing point	Not available
Melting point	Not applicable
Boiling point	Not available
Flammability	Not available
Lower explosive limit	Not applicable
upper explosive limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Pure pH	Not available
pH value at 10g/l	Not available
kinematic viscosity	Not available
Solubility	Soluble in water
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Relative density	1.17
Mass density	1.17 g/cm³
Vapour density	Not available
Particle characteristics	Not applicable

9.2. Other information

Explosive properties	Not applicable
Oxidising properties	Not applicable
pH (1%)	12 - 13
Evaporation rate:	Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Stable in the recommended storage and handling conditions.

10.2. Chemical stability
Stable in the recommended storage and handling conditions.

10.3. Possibility of hazardous reactions
Reaction with sodium hypochlorite
Exothermic reactions with acids.

10.4. Conditions to avoid
Excessive heat (>50°C)

10.5. Incompatible materials
Strong acids.
Light metals and/or colored.

10.6. Hazardous decomposition products
In contact with certain metals (aluminium, zinc...), release of flammable and/or explosive hydrogen if ignited.

These data are given for the concentrated mixture. The use of the mixture under its diluted form must be performed in conformity with data given by the technical data sheet and the technical adviser.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) N°1272/2008

Substance-related data:

Acute toxicity
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : LD 50 - dermal (OECD 402): > 5,000 mg/kg. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : LD 50 - oral (OECD 401): > 5,000 mg/kg.
Sodium (xylenes and 4-ethylbenzene)sulfonates (30%) : LD 50 - dermal rabbit (OECD 402): > 2,000 mg/kg bw. - MSDS supplier

Skin corrosion/irritation
Sodium hydroxide (50%) : Cutaneous contact rat . Corrosive to the skin - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : Cutaneous contact (OECD 404): . Irritating - MSDS supplier
Sodium hydroxide (50%) : Skin corrosion/irritation . Causes severe burns. - MSDS supplier
Sodium hydroxide (50%) : Skin corrosion/irritation . Causes severe burns. - MSDS supplier

Serious damage to eyes/eye irritation
Sodium hydroxide (50%) : Eye contact : . corrosive to the eyes - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : Eye irritation (OECD 405): . Risk of serious damage of eyes - MSDS supplier
Sodium hydroxide (50%) : Serious damage to eyes/eye irritation . corrosive to the eyes - MSDS supplier
Sodium hydroxide (50%) : Serious damage to eyes/eye irritation . Serious damage to eyes - MSDS supplier

Respiratory tracts irritation
Sodium hydroxide (50%) : Respiratory tracts irritation . Fog inhalation is irritant for respiratory tract - MSDS supplier

Sensitisation
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : Cutaneous contact (OECD 406): . Not sensitising - MSDS supplier

Mutagenicity
Sodium hydroxide : . Not mutagenic - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : (OECD 471): . Not mutagenic - MSDS supplier

Carcinogenicity
Sodium hydroxide : mouse . Not carcinogenic - MSDS supplier

SUBCHRONIC TOXICITY
Alcohols C12-C14, ethoxylates, sulphate, sodium salts : NOAEL - oral - 90days (OECD 408): > 225 mg/kg. - MSDS supplier

Mix-related data: :

Acute toxicity
. Not determined for the mixture.

Skin corrosion/irritation
Skin corrosivity . The mix is considered to be corrosive for the skin under the criteria of Regulation 1272/2008/EC.

Serious damage to eyes/eye irritation
Ocular corrosivity . Causes serious eye damage according to the criteria of Regulation 1272/2008/EC.

Respiratory / skin sensitisation
Skin sensitisation . The mixture is not considered as a skin sensitiser according to 1272/2008/EC Regulation.
Respiratory sensitisation . The mixture is not considered as a respiratory sensitiser according to 1272/2008/EC Regulation.

Mutagenicity
. The classification criteria are not met given the available data.

Carcinogenicity
. The classification criteria are not met given the available data.

Reproductive toxicity
. The classification criteria are not met given the available data.

Specific target organ toxicity - single exposure
. The classification criteria are not met given the available data.

Specific target organ toxicity - repeated exposure
. The classification criteria are not met given the available data.

Aspiration hazard

. The classification criteria are not met given the available data.

Most important symptoms and effects, both acute and delayed :

Skin contact : Corrosive : Causes severe burns.

Eye contact : Causes serious eye damage.

Ingestion : Can induce mouth and digestive tract irritation .

Inhalation : Aerosols can induce respiratory tracts irritation.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Not concerned

SECTION 12: ECOLOGICAL INFORMATION

12.1. à 12.4. Toxicity - Persistence and degradability - Bioaccumulative potential - Mobility in soil

Substance-related data:

Acute toxicity
Sodium hydroxide : LC 50 - 96 h fishes (Gambusia affinis) 35 - 189 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : LC 50 fishes (Leuciscus idus) 10 - 100 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : EC 50 daphnia (Daphnia magna) (OECD 202): 10 - 100 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : EC 50 algae (Scenedesmus subspicatus) (OECD 201): > 100 mg/L. - MSDS supplier
Alcohols, C12-16 (100%) : EC 50 daphnia (Daphnia magna) (OECD 202): 10 - 100 mg/L. - MSDS supplier
Alcohols, C12-16 (100%) : EC 50 algae (Scenedesmus subspicatus) (OECD 201): > 0.1 - 1 mg/L. - MSDS supplier
Alcohols, C12-16 (100%) : EC0 (Microorganisms / activated sludge) (Pseudomonas putida) > 100 mg/L. - MSDS supplier

Chronic toxicity
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : NOEC fishes (Leuciscus idus) 1 - 10 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts : NOEC daphnia (Daphnia magna) 0.1 - 1 mg/L. - MSDS supplier

Degradability
Sodium hydroxide (50%) : Biodegradability aerobic . Not applicable - MSDS supplier
Sodium hydroxide (50%) : Biodegradability anaerobic . Not applicable - MSDS supplier
Sodium hydroxide (50%) : Half life air 13 seconds. Degradation product = sodium carbonate - MSDS supplier
Sodium hydroxide (50%) : Water. . Instantaneous ionization; Degradation products : salts - MSDS supplier
Sodium hydroxide (50%) : soil . Ionization / neutralization - MSDS supplier

Bioaccumulation
Sodium hydroxide (50%) : . Not applicable - MSDS supplier

Mobility
Sodium hydroxide (50%) : air . Instantaneous degradation - MSDS supplier
Sodium hydroxide (50%) : Water. . Important solubility and mobility - MSDS supplier
Sodium hydroxide (50%) : soil/sediments . Important solubility and mobility; Contamination of ground water in case of rain - MSDS supplier

Mix-related data: :

Acute toxicity
fishes . No data available.
daphnia . No data available.
algae . No data available.

Chronic toxicity
. No data available.

Degradability
. The surface agents contained in this mix are in line with the requirements of the Detergent Regulation 648/2004/EC.

Bioaccumulation
. No data available.

Mobility
. No data available.

Conclusion :
The mixture is not considered to be dangerous for the environment according to 1272/2008/EC Regulation.

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

12.6 Endocrine disrupting properties

Not concerned

12.7. Other adverse effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Treatment of the mixture :
Do not discharge the product directly to sewer or to environment.
Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

Packaging treatment :
Rinse thoroughly the packaging with water and treat the effluent like wastes.
Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

SECTION 14: TRANSPORT INFORMATION

ROAD TRANSPORT: Rail/Route (RID/ADR)

14.1 UN no : 1824

14.2 UN proper shipping name :
SODIUM HYDROXIDE SOLUTION

14.3 Transport hazard class(es) : 8

14.4 Packing group : II
Hazard identification number : 80
Label : 8



Tunnel code : (E)

14.5 Environmental hazard : No

14.6 Special precautions for user : No information.

Limited Quantity (QL): 1L

MARITIME TRANSPORT : IMDG

14.1 UN no :1824

14.2 UN proper shipping name : SODIUM HYDROXIDE SOLUTION

14.3 Transport hazard class(es) : 8



14.4 Packing group : II

14.5 Environmental hazard
Marine pollutant : No

14.6 Special precautions for user : No information.
EmS number : F-A, S-B

Limited Quantity (QL): 1L

14.7 Maritime transport in bulk according to IMO instruments : Not concerned

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EU) n°528/2012 concerning the making available on the market and use of biocidal products :
Not concerned

Regulations relating to the hazards from major accidents :
SEVESO 3 Directive (2012/18/EC) : Not concerned

Regulations relating to the classification, packaging and labelling of substances and mixtures :
Regulation (EC) 1272/2008 amended.

Waste regulations :
2008/98/EC Directive amended by 2015/1127/EC Directive - Regulation 1357/2014/EC
Decision 2014/955/EC which establishes the list of hazardous waste.

Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals : Not concerned

Protection of workers :
Directive 98/24/EC of 07/04/1998 on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EU) 2019/1021 of 20 June 2019 on persistent organic pollutants : Not applicable

Regulation (EC) 1005/2009 amended on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors:
Not concerned

Regulation (EC) 648/2004 :
In conformity with the regulation in force on detergents: Regulation (EC) N° 648/2004.
Ingredient datasheet for the medical staff is available upon written request.
Contains :
5-15% Anionic surfactants
< 5% Polycarboxylates, Amphoteric surfactants

Comply with national and local legislation.

UN Globally Harmonised System (GHS) on Classification and Labelling of Chemical (GB CLP - SI 2020 No. 1567) and UK REACH (SI 2020 No. 1577)

15.2. Chemical safety assessment

This safety data sheet has been drafted taking into account the information from exposure scenarios for the substances making up the mixture.

SECTION 16: OTHER INFORMATION

The safety data sheet is additional to the technical data sheet but does not replace it. The information given here in is to the best of our knowledge correct and is given in good faith. We must also draw the user's attention on potential risks of the product is used for other purposes for which the product is known.
In no way does it exempt users from being aware of and complying with regulations applicable to their activity. It is their sole responsibility to take all necessary precautions in accordance to the usage of the product they are aware of.
Regulations are only stated in order to help users fulfill the duties involved in the use of the product.
This description should not be considered as exhaustive. It does not exempt users from ensuring if other demands need to be complied with-according to other laws than the ones hereby stated and applicable to holding and usage of the product-demands for which they will remain sole responsibility.

Section(s) modified compared with the previous version :
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

List of H phrases referred to in section 3 :
H290 : May be corrosive to metals.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Sources of key data used to compile the data sheet :
MSDS supplier

Historical :
Version 7.0.1
Cancels and replaces previous version 7.0.

SAFETY DATA SHEET
CAUSTAK 30

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name CAUSTAK 30

Product number HLC35

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Detergent. For professional use only.

Uses advised against Not for direct contact with Food or Beverage stuffs. Not for oral consumption. Not for use by hand.

1.3. Details of the supplier of the safety data sheet

Supplier UK - Holchem Laboratories Ltd. Gateway House, Pilsworth Road, Bury, BL9 8RD
Tel : +44 (0) 1706 222288; e-mail info@holchem.co.uk
EU - Kersia Deutschland GmbH, Marie-Curie-Straße 23
53332 Bornheim - Sechtem

1.4. Emergency telephone number

Emergency telephone Emergency Information:-
For accidents and spillages involving this product that pose a threat to the environment, or human health, or require immediate first aid advice call:- +44(0) 1865 407333.
Note:- This number will not accept order queries or calls dealing with equipment breakdowns.
This product is registered with the NPIS. UK Environment Agency 24hour Advisory Service 0800 807060. Irish Environmental Protection Agency 1890 335599 (This is a Lo Call Number)
This product is registered with the National Poisons Information Centre at Beaumont Hospital, Dublin 9, Ireland. Tel:+353 (01) 809 2566.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Met. Corr. 1 - H290

Health hazards Skin Corr. 1A - H314 Eye Dam. 1 - H318

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

CAUSTAK 30

Precautionary statements	P234 Keep only in original packaging. P280 Wear protective clothing, gloves, eye and face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/ attention. P501 Dispose of contents/ container in accordance with national regulations.
Contains	SODIUM HYDROXIDE
Detergent labelling	< 5% polycarboxylates
Supplementary precautionary statements	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. Note:- H290 May be Corrosive to Metals Classification relates to Soft Metals such as Aluminium and Copper, when used correctly this product is not expected to be corrosive to 304 and 316 Stainless Steel.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SODIUM HYDROXIDE		**25-35%**
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27

Classification
Met. Corr. 1 - H290
Skin Corr. 1A - H314
Eye Dam. 1 - H318

The full text for all hazard statements is displayed in Section 16.

Composition comments To the best of our knowledge, all of the substances used in this product are being supported for the relevent application in REACH. Note:- Corrosion to Metals H290 statement refers to Soft Metals such as Aluminium or Copper, this product is not expected to corrode 304 or 316 Stainless Steel.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information For immediate First Aid advice in the UK, dial 111. When it is safe to do so, remove victim immediately from source of exposure. However, consideration should be given as to whether moving the victim will cause further injury.

Inhalation Remove affected person from source of contamination. Provide rest, warmth and fresh air. If breathing stops, provide artificial respiration. Get medical attention if any discomfort continues.

Ingestion Do not induce vomiting. Rinse mouth thoroughly. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention.

Skin contact Remove contaminated clothing that is not stuck to the skin. Flush area with clean water. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

CAUSTAK 30

Eye contact Remove any contact lenses and open eyelids wide apart. Promptly wash eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes and get medical attention.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information Neat product may cause chemical burns and permanent eye damage. Dilute product may cause irritation to the skin and eyes.

Inhalation Inhalation of neat product is unlikely. However, inhalation of mists or vapours of diluted product may result in soreness, irritation or burns to the mouth, nose and respiratory tract.

Ingestion Unlikely route of exposure without deliberate abuse. If neat chemical is ingested, chemical burning of mouth, throat and GI tract will occur. If dilute chemical is ingested, soreness of mouth, throat and GI tract may occur together with redness and blistering.

Skin contact May cause serious chemical burns to the skin.

Eye contact May result in permanent eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Contains Sodium Hydroxide (Caustic Soda) in Aqueous Solution Rinse well with water to neutral pH.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media This product will not support combustion and is not flammable. Use an extinguishing media suitable for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Specific hazards On heating corrosive fumes may be produced. In contact with some metals (Aluminium, Zinc and their Alloys) Hydrogen Gas is formed, which may form an explosive mixture with air. Note - Comment refers to neat product.

5.3. Advice for firefighters

Protective actions during firefighting Protective clothing and respiratory protection should be worn when tackling fires involving this product. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

CAUSTAK 30

Reference to other sections See sections 8,12 & 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Refer to section 8.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place. Keep above chemical's freezing (melting) point. Store away from the following materials: Acids. Store between +5 and +40 Degrees C

7.3. Specific end use(s)

Specific end use(s) Detergent, refer to Product Information Sheet for full details.

Usage description This product is suitable for use in food and beverage processing plants, but it is not designed for direct food contact.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³
WEL = Workplace Exposure Limit.

Ingredient comments As a requirement of REACH we have considered all of the components of this formulation. We believe that Sodium Hydroxide (NaOH) is the most hazardous component of this formulation. Sodium Hydroxide is not expected to be systemically available to the body under normal handling and use conditions, therefore systemic effects of Sodium Hydroxide after Dermal or Inhalation Exposure are not expected to occur. Based on data from our raw material suppliers, we understand that if the risk management measures outlined in section 8.2 are followed , the inhalation exposure is below the DNEL of 1mg/m3. Where an exposure level is quoted, a risk assessment should consider if there is a need to monitor the atmosphere of the working environment. Results should be compared against the WEL and/or DNEL information provided. The Long Term WEL refers to total exposure of a worker to a specific substance averaged out over an 8 hour period.
The Short Term WEL refers to a single exposure of a worker to a specific substance over a 15 minute period.
If the Short Term WEL is exceeded and no Long Term Limit is set, further exposure during the working shift is not permitted. Further controls should be implemented to ensure that future exposure to the substance is reduced below the levels set before the activity is repeated/continued. Where no Short Term WEL exists, guidance from the HSE is to use a value of three times the Long Term WEL.
The WEL limits are laid down in the EH40 list as supplied by the HSE. Where a worker is exposed to levels approaching a limit, further exposure control measures should be considered to reduce exposure to the substance. DNEL and/or PNEC information is supplied by manufacturers of substances in accordance with REACH legislation (Regulation (EC) No 1907/2006) , and is used to provide suitable risk reduction measures to limit exposure of the user of the substance to a non hazardous level. If the measured level of exposure by a route divided by the DNEL for the route is greater than 1, then further exposure controls should be implemented as described in section 8.2. Where new information becomes available under REACH, this will be passed on as revisions to the Safety Data Sheet.

CAUSTAK 30

SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL	Industry - Inhalation; Long term local effects: 1.0 mg/m³ DNEL data for Professional users is not yet available, but it is assumed to be the same as for Industrial users. Industry - Dermal; Short term local effects: 2%
PNEC	No information is available for PNEC data for Sodium Hydroxide

8.2. Exposure controls

Protective equipment



Appropriate engineering controls	As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.
Personal protection	The PPE indicated above is not a COSHH assessment. It represents PPE that should be considered during the manufacture, distribution, use and final disposal stages of this product's life cycle. It is the responsibility of employers to conduct a COSHH/risk assessment to determine appropriate PPE levels. The information given below should be used to support this assessment. Where possible replace manual processes with automated or closed processes to minimise contact with the product.
Eye/face protection	Wear full-face visor or shield. Refer to EN Standard 166 to select appropriate level of protection.
Hand protection	Impervious Chemical Resistant Gloves of Butyl Rubber, PVC, Polychloroprene with a natural latex liner, all with a minimum material thickness 0.5mm and a breakthrough time of >480mins. Alternatively Nitrile Rubber, Fluorinated Rubber, both with a minimum thickness of 0.35 - 0.4mm and a breakthrough time of >480minutes. Refer to Standard EN 374 and EN 16523
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible. Reference to EN 13832 and EN 943 is useful when selecting footwear and clothing.
Hygiene measures	Promptly remove non-impervious clothing that has become contaminated, provided it is not adhered to the skin. Contaminated clothing and shoes must be discarded. Provide eyewash station and safety shower.
Respiratory protection	No specific recommendation made, but respiratory protection must be used if the general level exceeds the Workplace Exposure Limit. In the case of dust or aerosol formation (eg spraying), or vapour from hot vessels, use respiratory protection with an approved filter (P2).
Environmental exposure controls	Do not allow the substance to contaminate surface water/ground water. See points 6, 12 &13. Discharge of solutions into effluent systems (including municipal drains) or to surface water are expected to cause significant pH changes. Discharge of solutions should be carried out such that pH changes are minimised. Where necessary pH buffering measures should be adopted. Users of this product should consult local drainage and permitting authorities to ensure that any restrictions or discharge consents are adhered to.

CAUSTAK 30

General Health and Safety Measures.	In use solutions are likely to have extreme pH values and should be considered to be classified as H314. This should be considered when selecting control measures and PPE. A full Risk Assessment should be carried out before handling any chemical(s). Risk Assessments should refer to COSHH, and any other relevant legislation or industry specific guidelines governing the use of chemicals. We recommend full protective overalls, gloves and face protection when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Odour	Ammoniacal
Odour threshold	Not applicable.
pH	pH (concentrated solution): >13 pH (diluted solution): 12 - 13 (1% solution)
Melting point	Not applicable.
Initial boiling point and range	115 - 120 Degrees C
Flash point	Not applicable.
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	1.33 @ 20 Degrees C
Bulk density	Not applicable.
Solubility(ies)	Soluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	Not determined.
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	Not applicable.
Particle size	Not applicable.
Molecular weight	Not applicable.

CAUSTAK 30

Volatility	Not applicable.
Saturation concentration	Not applicable.
Critical temperature	Not applicable.
Volatile organic compound	Not applicable.
Explosive Properties	Not Classified as Explosive
Storage Temperature Range	+5 to +40 degrees C

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Not expected to react when correctly stored and used. Mixing with other chemicals may produce unexpected reactions. The solution is strongly alkaline and reacts with strong acids with heat generation.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. - See note 10.6.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Refer to section 10.1. Do not mix with acids, this will generate heat and give off corrosive vapours.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong acids. Reaction with Aluminium, Zinc, Tin, Copper or their alloys produces flammable Hydrogen Gas.

10.6. Hazardous decomposition products

Hazardous decomposition products No specific hazardous decomposition products noted. - See section 10.5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Respiratory sensitisation

Respiratory sensitisation No evidence of respiratory sensitisation for any component of this formulation.

Skin sensitisation

Skin sensitisation No evidence of skin sensitisation for any component of this formulation.

Carcinogenicity

Carcinogenicity The components of this formulation are corrosive to skin and the respiratory tract, but will not be systemically available in the body under normal conditions of handling. As a consequence it is not expected to cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility The components of this formulation are corrosive to the skin and respiratory tract, but will not be systemically available in the body under normal conditions of use and handling. As a consequence it is not expected to be toxic to the reproductive system or the developing foetus.

CAUSTAK 30

General information	Toxic effect linked with corrosive properties. See section 4.2.
Inhalation	Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose. - See section 4.2.
Ingestion	Causes severe burns. May cause chemical burns in mouth, oesophagus and stomach.
Skin contact	Causes severe burns.
Eye contact	Risk of serious damage to eyes. May cause permanent eye injury.

SECTION 12: Ecological information

Ecotoxicity This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Normal use is unlikely to pose a risk to the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish This mixture is not classified as toxic to aquatic organisms.
Note:- pH values greater than 10.5 may be fatal to fish and other aquatic organisms, there may also be damage to aquatic plants.
Normal use of the diluted product is not expected to pose any risk.
See note 12.0

12.2. Persistence and degradability

Persistence and degradability This product consists mainly of inorganic components for which biodegradation assessment is not applicable. The product meets the requirements of the European Detergents Regulation 648/2004 as amended.

12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to bioaccumulate.

Partition coefficient Not applicable.

12.4. Mobility in soil

Mobility The product contains substances which are water-soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered. Do not mix with other chemicals. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1824

CAUSTAK 30

UN No. (IMDG)	1824
UN No. (ICAO)	1824
UN No. (ADN)	1824

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (IMDG)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (ICAO)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (ADN)	SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C5
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

IMDG Code segregation group	18. Alkalis
EmS	F-A, S-B
ADR transport category	2
Emergency Action Code	2R
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

CAUSTAK 30

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	UK Adoption and Implementation of the UN Globally Harmonised System (GHS) on Classification and Labelling of Chemicals (GB CLP) and considers UK National REACH legislation.
EU legislation	European Regulation (EC) No 1272/2008 (as amended) on Classification, Labelling and Packaging of Substances and Mixtures. Also considered is the REACH Regulation (EC) No.1907/2006 (as amended).

15.2. Chemical safety assessment

Pcs Information

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	(EC) No. 1272/2008 : EU Regulation on Classification, Labelling and Packaging of Substances and Mixtures. COSHH - Control of Substances Hazardous to Health. DNEL - Derived No Effect Limit. Industry - Refers in section 8 to application of the substance in an industrial process. NPIS - National Poisons Information Service. PBT - Persistent, Bioaccumulative & Toxic. Professional - Refers in section 8 to application/use of the preparation/product in a skilled trade premises. REACH - Registration, Evaluation, Authorisation & restriction of CHemicals (Regulation EC 1907/2006). vPvB - Very Persistent, Very bioaccumulative.
General information	Only trained personnel should use this material. This document is a Safety Data Sheet, NOT a CoSHH assessment. It is the customer's responsibility to conduct a full CoSHH assessment, taking into account the information held within this document along with other local factors considered in a risk assessment. The Risk and Hazard statements listed below are the full text of abbreviations used in this document. They are not the final classification, for this refer to section 2.
Revision comments	Amendment to the emergency phone number in Section 1.4.
Revision date	28/10/2021
Hazard statements in full	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
REACH extended MSDS comments	REACH requires that persons handling chemicals should take the necessary risk management measures, in accordance with assessments from manufacturers and importers of chemical substances. The relevent recommendations must be passed along the supply chain. These assessments are generally reported in Exposure Scenarios. Where Exposure Scenarios have been provided for substances used in this product, the relevent information is incorporated into the safety data sheet.

END OF SAFETY DATA SHEET

CAUSTAK 30

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

CHLORFOAM PLUS
Code: HLC61

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.3
Creation date : 09/12/22
Revision: 29/12/22
Print Date : 30/01/24

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: CHLORFOAM PLUS

UFI : 1T8H-E06Q-U008-MJ8F

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the product

LIQUID ALKALI
FOOD INDUSTRY
CHLORFOAM PLUS contains Caustic Soda (NaOH), Sodium Hypochlorite, foaming agents and a blend of sequestering agents and surfactants to inhibit scale formation and aid wetting, emulsification and foam stability.

1.3. Details of the supplier of the safety data sheet

Company identification

Out of hours Emergency Telephone Number +44 (0) 1865 407333
UK - Holchem Laboratories Ltd. Gateway House, Pilsworth Road, Bury, BL9 8RD
Tel : +44 (0) 1706 222288; e-mail info@holchem.co.uk

EU - HYPRED SAS
55, Boulevard Jules Verger B.P 10180
35803 DINARD Cedex - FRANCE
Tél : +33 (0)2 99 16 50 00
Fax : +33 (0)2 99 16 50 20
e-mail : kersia@kersia-group.com

For information regarding this safety data sheet, please contact :
regulatory@kersia-group.com

1.4. Emergency telephone number

Emergency phone number

Emergency direct number (24 hours a day, 7 days a week) : +44 1273 289451

CARECHEM 24
Tel. +44 1865 407333

For information or to report a poisoning incident contact The National Poisons Information Centre:
+353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week).

Healthcare Professionals:
+353 (1) 809 2566 (24 hour service)
NHS: 111

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The mixture meets the classification criteria provided for under Regulation (EC) No 1272/2008.

	EUH 031: Contact with acids liberates toxic gas.
Substance corrosive to metals - Category 1	H290: May be corrosive to metals.
Skin corrosion - Category 1A	H314: Causes severe skin burns and eye damage.
Serious damage to eyes - Category 1	H318: Causes serious eye damage.
Hazardous to the aquatic environment — Acute - Category 1	H400: Very toxic to aquatic life.
Hazardous to the aquatic environment — Chronic - Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to 1272/2008/EC Regulation:

Hazard pictograms(s) :



Signal word :
Danger

Contains : Sodium hydroxide+ Sodium hypochlorite+ Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides

Hazard statement(s) :
H290: May be corrosive to metals.
H314: Causes severe skin burns and eye damage.
H410: Very toxic to aquatic life with long lasting effects.
EUH 031: Contact with acids liberates toxic gas.

Precautionary statement(s) :
P234: Keep only in original packaging.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313: Get medical advice/attention.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

The mixture does not contain substance of "Very high Concern" (SVHC) in the candidate list of substances for Autorisation published and updated regularly by ECHA in concentration greater than 0.1%.
The mixture does not contains any substance responding to criteria for classification as PBT or vPvB in accordance with Annex XIII of Regulation (EC) No 1907/2006.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable as this involves a mixture.

3.2. Mixtures

Chemical nature of the mixture : LIQUID ALKALI

Substance(s)	CAS number(s)	EINECS number(s)	index	No registration REACH	Classification according to Regulation (EC) 1272/2008	SCL M-factor ATE	Type
5% <= Sodium hydroxide < 10%	1310-73-2	215-185-5	011-002-00-6	01-2119457892-27	Skin Corr. 1A H314 Met. Corr. 1 H290	C ≥ 5% Skin Corr. 1A H314 2% ≤ C < 5% Skin Corr. 1B H314 0.5% ≤ C < 2% Skin Irrit. 2 H315 Eye Irrit. 2 H319	(1)
1% <= Sodium hypochlorite < 10%	7681-52-9	231-668-3	017-011-00-1		Met. Corr. 1 H290 Skin Corr. 1B H314 STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 1 H410 EUH 031 Eye Dam. 1 H318	C ≥ 5% EUH 031 M Factor (Acute) 10 M Factor (Chronic) 1	(1)
1% <= Sodium (xylenes and 4-ethylbenzene)sulfonates < 5%	1300-72-7	701-037-1			Eye Irrit. 2 H319		(1)
1% <= Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides < 5%	308062-28-4	931-292-6		01-2119490061-47	Acute Tox. 4 (oral) H302 Skin Irrit. 2 H315 Eye Dam. 1 H318 Aquatic Acute 1 H400 Aquatic Chronic 2 H411	M Factor (Acute) 1	(1)
1% <= Sodium Octanoate < 5%	1984-06-1	217-850-5			Skin Irrit. 2 H315 Eye Irrit. 2 H319		(1)
0.1% <= Alcohols C12-C14, ethoxylates, sulphate, sodium salts < 1%	68891-38-3	500-234-8		01-2119488639-16	Skin Irrit. 2 H315 Eye Dam. 1 H318 Aquatic Chronic 3 H412		(1)

Type
(1) : Substance classified as hazardous for health and/or the environment
(2) : Substance with an exposure limit at the work station.
Substance of very high concern candidate for the authorisation procedure:
(3) : Substance considered as PBT (persistent, bioaccumulable, toxic)
(4) : Substance considered as vPvB (very persistent, very bioaccumulable)
(5) : Substance considered as carcinogenic category 1A
(6) : Substance considered as carcinogenic category 1B
(7) : Substance considered as mutagenic category 1A
(8) : Substance considered as mutagenic category 1B
(9) : Substance considered as reprotoxic category 1A
(10) : Substance considered as reprotoxic category 1B
(11) : Substance considered as endocrine disrupter
(12) : Other substance considered hazardous to health or the environment
(N) : Nanomaterial

Full text of H- and EUH- phrases : see section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General indications:
Take the contaminated clothes and shoes off immediately. Wash them before wearing them again.
In case of faintness , get medical advice/attention. Show this safety data sheet to the doctor.

In the event of inhalation :
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Put into practice respiratory help procedure if needed and get medical advice immediately.

In the event of contact with the skin :
If symptoms occur, call the Poison Control Centre or a doctor.
Take off immediately all contaminated clothing.
Wash immediately with plenty of water for 15 minutes at least.

In the event of contact with the eyes :
Rinse at once with a soft stream of water for at least 15 minutes, eyes wide open.
Consult a specialist.
Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

In the event of ingestion :
Rinse mouth.
Do NOT induce vomiting.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact : Corrosive : Causes severe burns.

Eye contact : Causes serious eye damage.

Ingestion : Can induce mouth and digestive tract irritation .

Inhalation : May cause a respiratory system irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treatments : Symptomatic treatment

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media :
Agents compatible with other products involved into fire.

Unsuitable extinguishing media :
None from our knowledge.

5.2. Special hazards arising from the substance or mixture

CHLORFOAM PLUS is non-flammable.
However, in contact with certain metals (aluminium, zinc, copper...), release of hydrogen whose mixtures with air are explosive.
The thermal decomposition can release/form:
Corrosive vapours

5.3. Advice for firefighters

Wear independent respiratory equipment and protective suit.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel :

Wear suitable protective clothing.
Evacuate non-essential staff and those not equipped with individual protection apparatus.

6.1.2. For emergency responders :

Evacuate the personnel to a safe location.
Keep people upwind and away from the location of the flow/leak.
Use personal protection equipment.

6.2. Environmental precautions

Intervention limited to trained staff.
Do not discharge the product directly to sewer or to environment.
Take as soon as possible all incompatible materials away.
Informing the authorities if the product penetrates in the sewers or in the waters of the public domain.

6.3. Methods and material for containment and cleaning up

Small spillage :
Absorb with an inert, non-combustible absorbent material, such as sand, earth, vermiculite or diatomaceous earth.

Large spillage :
Mark out and pump in an emergency tank.
Never return spills in original containers for re-use.
Keep in suitable, properly labelled and closed containers for disposal.

6.4. Reference to other sections

Respect protective measures presented at heading 8.
Refer to section 13 for the elimination.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Take off immediately all contaminated clothing.
Wear suitable protective clothing.
Do not eat, drink or smoke in work area. Avoid projections during use.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Storage :

Keep only in the original container.
Keep container closed.
Keep in a clean, cool and well-ventilated place away from sources of heat and intense light.
Storage in the original, closed packaging, between +5°C and +30°C.
The floor of rooms will be impermeable and will form a retention basin so that the liquid cannot spread outside if spilled accidentally.

7.2.2. Packaging or wrapping materials :

High density polyethylene recommended.

7.3. Specific end use(s)

No other recommendation.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values :

Substance	CAS number	Country	Type	Value	Unit	Comments	source
Sodium hydroxide	1310-73-2	IRL	OEL Short term	2	mg/m³	15 minutes reference period	International limit values for chemical agents

8.2. Exposure controls

According to the requirements of Directive 98/24 /EC, the employer is required to conduct a risk assessment and implement appropriate risks management measures.
* For any situation where the absence of risk is not proven, he must consider the substitution or reduction of risk by improving in priority processes used and collective protection measures. The effectiveness of the solutions implemented will be checked by measurement in comparison to the statutory limit values for substances defined in Section 8.1.
* If the risk remains after these corrective actions, he must always check by routinely measuring compliance with regulatory OEL if they exist in section 8.1 and apply all the individual protective measures given in section 8.2.
* When formalized risk assessment indicates a low risk to workers' health, control of compliance with regulatory OEL may not be considered and all individual protection measures is not always mandatory.

8.2.1. Appropriate engineering controls :

Ensure adequate ventilation.
Apply the necessary technical measures to comply with the professional exposure limit values.

8.2.2. Individual protection measures, such as personal protective equipment :

Eye/face protection :
Use safety glasses or facial screen in conformity with the EN 166 standard.



Hand protection :
Use chemical resistant gloves approved to EN 374.
Examples of prefered materials for insulating gloves:
Natural rubber.
Neoprene.
PVC



Skin protection :
Wear chemical-resistant protective shoes and clothing.
In weak spraying, wear boots or half-boots which protect from chemical risk that comply with standard NF EN 13832-2.



Respiratory protection :
Always wear approved respiratory protection if the workplace exposure limit is likely to be exceeded.
During use that causes vapours or aerosols to form, wear a half-mask compliant with standard EN 140 or a full mask compliant with standard EN 136 fitted with a filter (compliant with standard EN 143) of type:
Filtration type B-P
P3: Particles, solid aerosols and liquids



Thermal hazards :
Not applicable

Health measures :
Safety shower and eye wash fountain near to workplace.

After using, wash systematically all personal protective equipment.
Handle in accordance with good industrial hygiene practices and the safety instructions.

8.2.3. Environmental exposure controls :

Do not discharge the product directly to sewer or to environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	clear yellow liquid
Colour	Yellow
Odour	bleach
Odour threshold	Not available
Freezing point	Not available
Melting point	Not applicable
Boiling point	Not available
Flammability	Not available
Lower explosive limit	Not applicable
upper explosive limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
pH value at 10g/l	11.5 - 12.5
Pure pH (20°C)	> 13
kinematic viscosity	Not available
Solubility	Persistent, Bioaccumulative and Toxic properties
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Relative density (20°C)	1.19
Mass density (20°C)	1.19 g/cm³
Vapour density	Not available
Particle characteristics	Not applicable

9.2. Other information

Explosive properties	Not applicable
Oxidising properties	Not applicable
Evaporation rate:	Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable in the recommended storage and handling conditions.

10.2. Chemical stability

Stable in the recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Exothermic reactions with acids.

10.4. Conditions to avoid

Excessive heat (>50°C)

10.5. Incompatible materials

Acids.
Light metals and/or colored.

10.6. Hazardous decomposition products

In presence of metal, release of hydrogen that is flammable and/or explosive if it catches fire.
Contact with acids liberates gaseous chlorine.

These data are given for the concentrated mixture. The use of the mixture under its diluted form must be performed in conformity with data given by the technical data sheet and the technical adviser.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) N°1272/2008

Substance-related data:

Acute toxicity
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : LD 50 - dermal (OECD 402): > 5,000 mg/kg. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : LD 50 - oral (OECD 401): > 5,000 mg/kg.
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : LD 50 - oral rat 1,064 mg/kg. - MSDS supplier
Sodium chlorate + Sodium hydroxide + Sodium hypochlorite + Sodium carbonate (15%) : LD 50 - oral male rat (OECD 401): 1,100 mg/kg. - MSDS supplier
Sodium chlorate + Sodium hydroxide + Sodium hypochlorite + Sodium carbonate (15%) : LD 50 - dermal rabbit (OECD 402): > 20,000 mg/kg. - MSDS supplier
Sodium chlorate + Sodium hydroxide + Sodium hypochlorite + Sodium carbonate (15%) : LC 50 - inhalation - 1hours male rat (OECD 403): 10.5 mg/L. - MSDS supplier

Skin corrosion/irritation
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : Cutaneous contact (OECD 404): . Irritating - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : Cutaneous contact . Irritating - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides (30%) : Skin corrosion/irritation rabbit (OECD 404): . Irritating - MSDS supplier
Sodium hydroxide (50%) : Skin corrosion/irritation . Causes severe burns. - MSDS supplier
Sodium hydroxide (50%) : Skin corrosion/irritation . Causes severe burns. - MSDS supplier

Serious damage to eyes/eye irritation
Sodium hydroxide (50%) : Eye contact : . corrosive to the eyes - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : Eye irritation . Risk of serious damage of eyes - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : Eye irritation (OECD 405): . Risk of serious damage of eyes - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides (30%) : Serious damage to eyes/eye irritation rabbit (OECD 405): . Causes burns. - MSDS supplier

Sodium hydroxide (50%) : Serious damage to eyes/eye irritation . corrosive to the eyes - MSDS supplier
Sodium hydroxide (50%) : Serious damage to eyes/eye irritation . Serious damage to eyes - MSDS supplier

Respiratory tracts irritation
Sodium hydroxide (50%) : Respiratory tracts irritation . Fog inhalation is irritant for respiratory tract - MSDS supplier

Sensitisation
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : Cutaneous contact (OECD 406): . Not sensitising - MSDS supplier
Sodium hypochlorite (15%) : guinea-pig (OECD 406 Buehler assay): . Not sensitising - MSDS supplier

Mutagenicity
Sodium hydroxide : . Not mutagenic - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : (OECD 471): . Not mutagenic - MSDS supplier

Carcinogenicity
Sodium hydroxide : mouse . Not carcinogenic - MSDS supplier

Specific target organ toxicity - repeated exposure
Sodium hypochlorite (15%) : NOAEL - oral - 90days male rat (OECD 408): 50 mg/kg bw day. - MSDS supplier
Sodium hypochlorite (15%) : NOAEL - oral - 90days female rat (OECD 408): 57.2 mg/kg bw day. - MSDS supplier
Sodium hypochlorite (15%) : LOAEL- inhalation - 30days rat (OECD 412): ≤ 3 mg/m³. - MSDS supplier

SUBCHRONIC TOXICITY
Alcohols C12-C14, ethoxylates, sulphate, sodium salts : NOAEL - oral - 90days (OECD 408): > 225 mg/kg. - MSDS supplier

Mix-related data: :

Acute toxicity
. Not determined for the mixture.

Skin corrosion/irritation
Skin corrosivity . The mix is considered to be corrosive for the skin under the criteria of Regulation 1272/2008/EC.

Serious damage to eyes/eye irritation
Ocular corrosivity . Causes serious eye damage according to the criteria of Regulation 1272/2008/EC.

Respiratory / skin sensitisation
Skin sensitisation . The mixture is not considered as a skin sensitiser according to 1272/2008/EC Regulation.
Respiratory sensitisation . The mixture is not considered as a respiratory sensitiser according to 1272/2008/EC Regulation.

Mutagenicity
. The classification criteria are not met given the available data.

Carcinogenicity
. The classification criteria are not met given the available data.

Reproductive toxicity
. The classification criteria are not met given the available data.

Specific target organ toxicity - single exposure
. The classification criteria are not met given the available data.

Specific target organ toxicity - repeated exposure
. The classification criteria are not met given the available data.

Aspiration hazard
. The classification criteria are not met given the available data.

Most important symptoms and effects, both acute and delayed :

Skin contact : Corrosive : Causes severe burns.

Eye contact : Causes serious eye damage.

Ingestion : Can induce mouth and digestive tract irritation .

Inhalation : May cause a respiratory system irritation.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Not concerned

SECTION 12: ECOLOGICAL INFORMATION

12.1. à 12.4. Toxicity - Persistence and degradability - Bioaccumulative potential - Mobility in soil

Substance-related data:

Acute toxicity
Sodium hydroxide : LC 50 - 96 h fishes (Gambusia affinis) 35 - 189 mg/L. - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : EC 50 - 48h daphnia 3.1 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : LC 50 fishes (Leuciscus idus) 10 - 100 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : EC 50 daphnia (Daphnia magna) (OECD 202): 10 - 100 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : EC 50 algae (Scenedesmus subspicatus) (OECD 201): > 100 mg/L. - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : IC 50 algae 0.143 mg/L. - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : LC 50 - 96h fishes 2.67 mg/L. - MSDS supplier
Sodium hypochlorite (15%) : LC 50 - 96hours fishes 0.06 mg/L. - MSDS supplier
Sodium hypochlorite (15%) : EC 50 - 48hours daphnia (Daphnia magna) (OECD 202): 141 µg/l. - MSDS supplier
Sodium hypochlorite (15%) : EC 50 (Algae (fresh water)) 0.1 mg/L. - MSDS supplier

Chronic toxicity
Alcohols C12-C14, ethoxylates, sulphate, sodium salts (28%) : NOEC fishes (Leuciscus idus) 1 - 10 mg/L. - MSDS supplier
Alcohols C12-C14, ethoxylates, sulphate, sodium salts : NOEC daphnia (Daphnia magna) 0.1 - 1 mg/L. - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : NOEC algae 0.067 mg/L. - MSDS supplier
Sodium hypochlorite (15%) : NOEC - 28days fishes (Menidia peninsulae) 0.04 mg/L. - MSDS supplier
Sodium hypochlorite (15%) : NOEC shellfishes 0.007 mg/L. - MSDS supplier
Sodium hypochlorite (15%) : NOEC (Algae (fresh water)) 0.002,1 mg/L. - MSDS supplier

Degradability
Sodium hydroxide (50%) : Biodegradability aerobic . Not applicable - MSDS supplier
Sodium hydroxide (50%) : Biodegradability anaerobic . Not applicable - MSDS supplier
Sodium hydroxide (50%) : Half life air 13 seconds. Degradation product = sodium carbonate - MSDS supplier
Sodium hydroxide (50%) : Water. . Instantaneous ionization; Degradation products : salts - MSDS supplier
Sodium hydroxide (50%) : soil . Ionization / neutralization - MSDS supplier
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides : Biodegradability . Easily biodegradable. - MSDS supplier

Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides (30%) : Biodegradability - 28days (OECD 301 D): > 90 %. Easily biodegradable. - MSDS supplier

Bioaccumulation
Sodium hydroxide (50%) : . Not applicable - MSDS supplier

Mobility
Sodium hydroxide (50%) : air . Instantaneous degradation - MSDS supplier
Sodium hydroxide (50%) : Water. . Important solubility and mobility - MSDS supplier
Sodium hydroxide (50%) : soil/sediments . Important solubility and mobility; Contamination of ground water in case of rain - MSDS supplier

Mix-related data: :

Acute toxicity
fishes . No data available.
daphnia . No data available.
algae . No data available.

Chronic toxicity
. No data available.

Degradability
. The surface agents contained in this mix are in line with the requirements of the Detergent Regulation 648/2004/EC.

Bioaccumulation
. No data available.

Mobility
. No data available.

Conclusion :
The mixture is considered to be dangerous for the environment according to 1272/2008/EC Regulation.

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

12.6 Endocrine disrupting properties

Not concerned

12.7. Other adverse effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Treatment of the mixture :
Do not discharge the product directly to sewer or to environment.
Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/

EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

Packaging treatment :
Rinse thoroughly the packaging with water and treat the effluent like wastes.
Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

SECTION 14: TRANSPORT INFORMATION

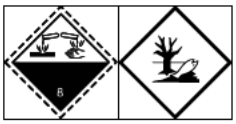
ROAD TRANSPORT: Rail/Route (RID/ADR)

14.1 UN number or ID number : 1719

14.2 UN proper shipping name :
CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide + Sodium hypochlorite)

14.3 Transport hazard class(es) : 8

14.4 Packing group : II
Hazard identification number : 80
Label : 8



Tunnel code : (E)

14.5 Environmental hazards : Yes (Sodium hypochlorite)

14.6 Special precautions for user : No information.

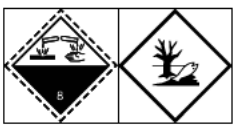
Limited Quantity (QL): 1L

MARITIME TRANSPORT : IMDG

14.1 UN number or ID number :1719

14.2 UN proper shipping name : CAUSTIC ALKALI LIQUID, N.O.S. (Sodium hydroxide + Sodium hypochlorite)

14.3 Transport hazard class(es) : 8



14.4 Packing group : II

14.5 Environmental hazards
Marine pollutant : Yes (Sodium hypochlorite)

14.6 Special precautions for user : No information.
EmS number : F-A, S-B

Limited Quantity (QL): 1L

14.7 Maritime transport in bulk according to IMO instruments : Not concerned

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EU) n°528/2012 concerning the making available on the market and use of biocidal products :
Not concerned

Regulations relating to the hazards from major accidents :
SEVESO 3 Directive (2012/18/EC) : E1

Regulations relating to the classification, packaging and labelling of substances and mixtures :
Regulation (EC) 1272/2008 amended.

Waste regulations :
2008/98/EC Directive amended by 2015/1127/EC Directive - Regulation 1357/2014/EC
Decision 2014/955/EC which establishes the list of hazardous waste.

Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals : Not concerned

Protection of workers :
Directive 98/24/EC of 07/04/1998 on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EU) 2019/1021 of 20 June 2019 on persistent organic pollutants : Not applicable

Regulation (EC) 1005/2009 amended on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors:
Not concerned

Regulation (EC) 648/2004 :
In conformity with the regulation in force on detergents: Regulation (EC) N° 648/2004.
Ingredient datasheet for the medical staff is available upon written request.

Contains :
< 5% Chlorine-based bleaching agents, Anionic surfactants, Polycarboxylates, Non-ionic surfactants

Comply with national and local legislation.

UN Globally Harmonised System (GHS) on Classification and Labelling of Chemical (GB CLP - SI 2020 No. 1567) and UK REACH (SI 2020 No. 1577)

15.2. Chemical safety assessment

This safety data sheet has been drafted taking into account the information from exposure scenarios for the substances making up the mixture.

SECTION 16: OTHER INFORMATION

The safety data sheet is additional to the technical data sheet but does not replace it. The information given here in is to the best of our knowledge correct and is given in good faith. We must also draw the user's attention on potential risks of the product is used for other purposes for which the product is known.
In no way does it exempt users from being aware of and complying with regulations applicable to their activity. It is their sole responsibility to take all necessary precautions in accordance to the usage of the product they are aware of.
Regulations are only stated in order to help users fulfill the duties involved in the use of the product.
This description should not be considered as exhaustive. It does not exempt users from ensuring if other demands need to be complied with-according to other laws than the ones hereby stated and applicable to holding and usage of the product-demands for which they will remain sole responsibility.

Section(s) modified compared with the previous version :
SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

List of H phrases referred to in section 3 :
EUH 031 : Contact with acids liberates toxic gas.
H290 : May be corrosive to metals.
H302 : Harmful if swallowed.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H335 : May cause respiratory irritation.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.

H412 : Harmful to aquatic life with long lasting effects.

Sources of key data used to compile the data sheet :
MSDS supplier

Historical :
Version 7.0.3
Cancels and replaces previous version 7.0.2

IMPACT QF
Code: 00EF0

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.0.1
Creation date : 09/12/22
Revision: 30/01/23
Print Date : 11/04/23

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: IMPACT QF

UFI : WR9H-Y0T3-600Q-VCH8

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the product

ALKALINE DETERGENT
FOOD INDUSTRY
IMPACT QF is a blend of non-ionic and non-QAC biocides which provide excellent detergency and cleaning power against light to medium soiling.

1.3. Details of the supplier of the safety data sheet

Company identification

Out of hours Emergency Telephone Number +44 (0) 1865 407333
UK - Holchem Laboratories Ltd. Gateway House, Pilsworth Road, Bury, BL9 8RD
Tel : +44 (0) 1706 222288; e-mail info@holchem.co.uk
EU - Kersia Deutschland GmbH, Marie-Curie-Straße 23
53332 Bornheim - Sechtem
Tel: +49 (0)222 790 820

For information regarding this safety data sheet, please contact :
regulatory@kersia-group.com

1.4. Emergency telephone number

Emergency phone number

Emergency direct number (24 hours a day, 7 days a week) : +44 1273 289451

CARECHEM 24
Tel. +44 1865 407333

For information or to report a poisoning incident contact The National Poisons Information Centre:
+353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week).
Healthcare Professionals:
+353 (1) 809 2566 (24 hour service)
NHS: 111

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The mixture meets the classification criteria provided for under Regulation (EC) No 1272/2008.

Skin irritation - Category 2	H315: Causes skin irritation.
Serious damage to eyes - Category 1	H318: Causes serious eye damage.
Hazardous to the aquatic environment — Acute - Category 1	H400: Very toxic to aquatic life.
Hazardous to the aquatic environment — Chronic - Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to 1272/2008/EC Regulation:

Hazard pictograms(s) :



Signal word :
Danger

Contains : Ethylenediamine tetraacetic acid tetrasodium salt+ N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine

Hazard statement(s) :
H315: Causes skin irritation.
H318: Causes serious eye damage.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement(s) :
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313: Get medical advice/attention.
P404: Store in a closed container.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable as this involves a mixture.

3.2. Mixtures

Chemical nature of the mixture : ALKALINE DETERGENT

Substance(s)	CAS number(s)	EINECS number(s)	index	No registration REACH	Classification according to Regulation (EC) 1272/2008	SCL M-factor ATE	Type
1% <= Ethylenediamine tetraacetic acid tetrasodium salt <= 5%	64-02-8	200-573-9		01-2119486762-27	Acute Tox. 4 (inhalation) H332 Acute Tox. 4 (oral) H302 Eye Dam. 1 H318 STOT RE 2 H373		(1)
1% <= N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine < 5%	2372-82-9	219-145-8			Aquatic Acute 1 H400 Acute Tox. 3 (oral) H301 STOT RE 2 H373 Skin Corr. 1A H314 Aquatic Chronic 1 H410	M Factor (Acute) 10 M Factor Chronic) 1	(1)
1% <= Sodium (xylenes and 4-ethylbenzene)sulfonates < 5%		701-037-1			Eye Irrit. 2 H319		(1)
0.1% <= Betaines, C12-14 (even numbered)-alkyldimethyl < 0.9%	66455-29-6	931-700-2		01-2119529251-48	Skin Corr. 1B H314 Aquatic Chronic 3 H412		(1)
0.1% <= Isotridecanol, ethoxylated < 0.9%	69011-36-5				Eye Dam. 1 H318 Aquatic Chronic 3 H412		(1)

Type
(1) : Substance classified as hazardous for health and/or the environment
(2) : Substance with an exposure limit at the work station.
Substance of very high concern candidate for the authorisation procedure:
(3) : Substance considered as PBT (persistent, bioaccumulable, toxic)
(4) : Substance considered as vPvB (very persistent, very bioaccumulable)
(5) : Substance considered as carcinogenic category 1A
(6) : Substance considered as carcinogenic category 1B
(7) : Substance considered as mutagenic category 1A

(8) : Substance considered as mutagenic category 1B
(9) : Substance considered as reprotoxic category 1A
(10) : Substance considered as reprotoxic category 1B
(11) : Substance considered as endocrine disrupter
(12) : Other substance considered hazardous to health or the environment
(N) : Nanomaterial

Full text of H- and EUH- phrases : see section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General indications:
Take the contaminated clothes and shoes off immediately. Wash them before wearing them again.
In case of faintness , get medical advice/attention. Show this safety data sheet to the doctor.

In the event of inhalation :
To transport the person to the air, to maintain it with the heat and rest.
Put into practice respiratory help procedure if needed and get medical advice immediately.

In the event of contact with the skin :
Take off immediately all contaminated clothing.
Wash immediately with plenty of water for 15 minutes at least.
If any sign of irritation appears, consult a dermatologist.

In the event of contact with the eyes :
Rinse at once with a soft stream of water for at least 15 minutes, eyes wide open.
Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

In the event of ingestion :
Rinse mouth.
Do NOT induce vomiting.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact : Causes skin irritation.

Eye contact : Causes serious eye damage.

Ingestion : No toxicological information available on the preparation.
Risk of mouth, oesophagus and stomach burns

Inhalation : Not considered as hazardous through inhalation under normal conditions of use.
Inhaling vapours or aerosols can irritate the nose and throat, a cough and difficulty breathing.

4.3. Indication of any immediate medical attention and special treatment needed

Treatments : Symptomatic treatment

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media :
Agents compatible with other products involved into fire.
CO2, powder, pulverized water

Unsuitable extinguishing media :
High pressure water jet

5.2. Special hazards arising from the substance or mixture

In the event of fire, formation of smoke and carbon monoxide.

5.3. Advice for firefighters

Wear independent respiratory equipment and protective suit.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel :

Wear suitable protective clothing.
Respect protective measures presented at heading 8.
Evacuate non-essential staff and those not equipped with individual protection apparatus.

6.1.2. For emergency responders :

Evacuate the personnel to a safe location.
Keep people upwind and away from the location of the flow/leak.
Use personal protection equipment.

6.2. Environmental precautions

Intervention limited to trained staff.
Do not discharge the product directly to sewer or to environment.
Take as soon as possible all incompatible materials away.
Informing the authorities if the product penetrates in the sewers or in the waters of the public domain.

6.3. Methods and material for containment and cleaning up

Small spillage :

Absorb with an inert, non-combustible absorbent material, such as sand, earth, vermiculite or diatomaceous earth.
Recover in a reservoir of help.

Large spillage :
Mark out, soak up with an inert absorbant and pump in an emergency tank.
Never return spills in original containers for re-use.
Keep in suitable, properly labelled and closed containers for disposal.

6.4. Reference to other sections

Respect protective measures presented at heading 8.
Refer to section 13 for the elimination.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not eat, drink or smoke in work area. Avoid projections during use.
Take off immediately all contaminated clothing.
It is recommended to wear a breathing mask in case of formation of vapours.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Storage :

Keep container closed.
Keep only in original packaging.
Do not store with oxidizing or acidic substances.

7.2.2. Packaging or wrapping materials :

High density polyethylene recommended.

7.3. Specific end use(s)

No other recommendation.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values :

Substance	CAS number	Country	Type	Value	Unit	Comments	source
Contains no substances with occupational exposure limit values.							

8.2. Exposure controls

According to the requirements of Directive 98/24 /EC, the employer is required to conduct a risk assessment and implement appropriate risks management measures.

* For any situation where the absence of risk is not proven, he must consider the substitution or reduction of risk by improving in priority processes used and collective protection measures. The effectiveness of the solutions implemented will be checked by measurement in comparison to the statutory limit values for substances defined in Section 8.1.
* If the risk remains after these corrective actions, he must always check by routinely measuring compliance with regulatory OEL if they exist in section 8.1 and apply all the individual protective measures given in section 8.2.
* When formalized risk assessment indicates a low risk to workers' health, control of compliance with regulatory OEL may not be considered and all individual protection measures is not always mandatory.

8.2.1. Appropriate engineering controls :

Ensure sufficient air exchange and/or exhaust in work areas.

8.2.2. Individual protection measures, such as personal protective equipment :

Eye/face protection :

Use safety glasses or facial screen in conformity with the EN 166 standard.



Hand protection :

Use chemical resistant gloves approved to EN 374.
Examples of materials for insulating gloves:
Rubber chloroprene (CR).
Butyl rubber.
Nitrile rubber.
Neoprene.
In the event of important contact (prolonged direct exposure): gloves of index of protection 6, corresponding to one duration of permeation > 480 min according to the standard EN 374 are advised.
In the event of limited contact (nonextensive splashes, short contacts): gloves of index of protection 2, corresponding to one duration of permeation > 30 min according to the standard EN 374 are advised.



Skin protection :

Wear chemical-resistant protective shoes and clothing.
Wear protective clothing conforms to the standards EN 13034 - type 6
In weak spraying, wear boots or half-boots which protect from chemical risk that comply with standard NF EN 13832-2.



Respiratory protection :

None under normal conditions of use.
Respiratory protection in the event of insufficient ventilation.
ABEKP2 type filtration.

Thermal hazards :
Not applicable

Health measures :
Safety shower and eye wash fountain near to workplace.
After using, wash systematically all personal protective equipment.
Handle in accordance with good industrial hygiene practices and the safety instructions.

8.2.3. Environmental exposure controls :

Do not discharge the product directly to sewer or to environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Blue
Odour	No characteristic odour
Odour threshold	Not available
Freezing point	Not available
Melting point	Not applicable
Boiling point	Not available
Flammability	Not available
Lower explosive limit	Not applicable
upper explosive limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
pH value at 10g/l	Not available
Pure pH	9.5 - 10.5
kinematic viscosity	Not available
Solubility	Soluble in water in all proportions
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Relative density (20°C)	1.02 - 1.05
Mass density (20°C)	1.02 - 1.05 g/cm³
Vapour density	Not available
Particle characteristics	Not applicable

9.2. Other information

Explosive properties	Not applicable
Oxidising properties	Not applicable
Evaporation rate:	Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable in the recommended storage and handling conditions.
Hazards linked to exothermal reactions.

10.2. Chemical stability

Stable in the recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Exothermic reaction with the strong acids.

10.4. Conditions to avoid

Excessive heat (>50°C)

10.5. Incompatible materials

Strong acids.
Strong oxidants.

10.6. Hazardous decomposition products

None to our knowledge in standard conditions of use.

These data are given for the concentrated mixture. The use of the mixture under its diluted form must be performed in conformity with data given by the technical data sheet and the technical adviser.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) N°1272/2008

Substance-related data:

Acute toxicity
Ethylenediamine tetraacetic acid tetrasodium salt : LD 50 - oral rat 1,780 mg/kg. - MSDS supplier
Isotridecanol, ethoxylated : LD 50 - oral rat > 5,000 mg/kg. - MSDS supplier
Ethylenediamine tetraacetic acid tetrasodium salt : LC 50 - inhalation - 4h rat 1.5 mg/L. - MSDS supplier
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (100%) : LD 50 - oral female rat (OECD 401): 243.6 mg/kg. - MSDS supplier
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (100%) : LD 50 - dermal rat (OECD 402): > 600 mg/kg. - MSDS supplier
Sodium (xylenes and 4-ethylbenzene)sulfonates (30%) : LD 50 - dermal rabbit (OECD 402): > 2,000 mg/kg bw. - MSDS supplier

Skin corrosion/irritation
Ethylenediamine tetraacetic acid tetrasodium salt : Skin irritation (OECD 404): . non irritating - MSDS supplier
Betaines, C12-14 (even numbered)-alkyldimethyl : Cutaneous contact (OECD 404): . Corrosive. - MSDS supplier

Serious damage to eyes/eye irritation
Isotridecanol, ethoxylated : Eye contact : rabbit (OECD 405): . Risk of serious damage of eyes - MSDS supplier
Betaines, C12-14 (even numbered)-alkyldimethyl : Eye contact : (OECD 405): . Corrosive. - MSDS supplier
Ethylenediamine tetraacetic acid tetrasodium salt : Eye contact : . Can induce serious ocular damages or even irreversibles - MSDS supplier

Sensitisation
Ethylenediamine tetraacetic acid tetrasodium salt : Sensitisation guinea-pig (OECD 406): . Not sensitising - The product has not been tested. The information comes from structure or analogue composition products. - MSDS supplier

Germ cell mutagenicity
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine : Ames test bacterias (Salmonella typhimurium) (OECD 471 Ames test): . Negative - MSDS supplier

Mutagenicity
Ethylenediamine tetraacetic acid tetrasodium salt : Micronucleus test (OECD 474): . Negative - Based on cross reading (N-(2-Hydroxyethyl)ethylenediaminetriacetic acid and trisodium salt)
Ethylenediamine tetraacetic acid tetrasodium salt : Lymphoma test mouse (OECD 476): . Negative - Based on cross reading (N-(2-Hydroxyethyl)ethylenediaminetriacetic acid and trisodium salt)
Ethylenediamine tetraacetic acid tetrasodium salt : Chromosomal aberration test (OECD 473): . Negative - Based on cross reading (N-(2-Hydroxyethyl)ethylenediaminetriacetic acid and trisodium salt)
Ethylenediamine tetraacetic acid tetrasodium salt : Ames test (OECD 471): . Negative - Based on cross reading (N-(2-Hydroxyethyl)ethylenediaminetriacetic acid and trisodium salt)

Carcinogenicity
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (100%) : (OECD 453): . Not carcinogenic - MSDS supplier

Mix-related data: :

Acute toxicity
. Not determined for the mixture.

Skin corrosion/irritation
Skin irritation . The mixture is considered to be irritating to the skin according to the Regulation 1272/2008/EC.

Serious damage to eyes/eye irritation
Ocular corrosivity . Causes serious eye damage according to the criteria of Regulation 1272/2008/EC.

Respiratory / skin sensitisation
Skin sensitisation . The mixture is not considered as a skin sensitiser according to 1272/2008/EC Regulation.
Respiratory sensitisation . The mixture is not considered as a respiratory sensitiser according to 1272/2008/EC Regulation.

Mutagenicity
. The classification criteria are not met given the available data.

Carcinogenicity
. The classification criteria are not met given the available data.

Reproductive toxicity
. The classification criteria are not met given the available data.

Specific target organ toxicity - single exposure
. The classification criteria are not met given the available data.

Specific target organ toxicity - repeated exposure
. The classification criteria are not met given the available data.

Aspiration hazard
. The classification criteria are not met given the available data.

Most important symptoms and effects, both acute and delayed :

Skin contact : Causes skin irritation.

Eye contact : Causes serious eye damage.

Ingestion : No toxicological information available on the preparation.
Risk of mouth, oesophagus and stomach burns

Inhalation : Not considered as hazardous through inhalation under normal conditions of use.
Inhaling vapours or aerosols can irritate the nose and throat, a cough and difficulty breathing.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Not concerned

SECTION 12: ECOLOGICAL INFORMATION

12.1. à 12.4. Toxicity - Persistence and degradability - Bioaccumulative potential - Mobility in soil

Substance-related data:

Acute toxicity
Ethylenediamine tetraacetic acid tetrasodium salt (40%) : EC 20 - 30 min bacterias (OECD 209): > 500 mg/L. - The product has not been tested. The information comes from structure or analogue composition products. - MSDS supplier
Ethylenediamine tetraacetic acid tetrasodium salt : EC 50 - 48h daphnia (Daphnia magna) > 100 mg/L. - The product has not been tested. The information comes from structure or analogue composition products. - MSDS supplier
Ethylenediamine tetraacetic acid tetrasodium salt : LC 50 - 96h fishes (Lepomis macrochirus) > 100 mg/L. - The product has not been tested. The information comes from structure or analogue composition products. - MSDS supplier
Isotridecanol, ethoxylated : LC 50 - 96h fishes (Leuciscus idus) 1 - 10 mg/L. - MSDS supplier
Isotridecanol, ethoxylated : EC 50 - 48h daphnia (Daphnia magna) 1 - 10 mg/L. - MSDS supplier
Isotridecanol, ethoxylated : EC 50 - 72h (plants) 1 - 10 mg/L. - MSDS supplier
Isotridecanol, ethoxylated : EC 10 - 17h (Microorganisms / activated sludge) > 2,500 mg/L. - MSDS supplier
Ethylenediamine tetraacetic acid tetrasodium salt : EC 50 - 72h Aquatic species > 100 mg/L. - MSDS supplier
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine : EC 50 - 48h daphnia (Daphnia magna) (EPA): 0.073 mg/L. - MSDS supplier
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine : LC 50 - 96h fishes (Oncorhynchus mykiss) (OECD 203): 0.68 mg/L. - MSDS supplier
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine : EC 10 - 72h algae (Desmodesmus subspicatus) (OECD 201): 0.012 mg/L. - MSDS supplier

Chronic toxicity
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine : NOEC - 72h algae (Desmodesmus subspicatus) (OECD 201): 0.006,9 mg/L. - MSDS supplier
Betaines, C12-14 (even numbered)-alkyldimethyl : NOEC - 72H algae (OECD 201): 0.8 mg/L. - MSDS supplier

Degradability
Ethylenediamine tetraacetic acid tetrasodium salt : Biodegradability . Not easily biodegradable - MSDS supplier
Isotridecanol, ethoxylated : Biodegradability (OECD 301 B): ≥ 90 %. Easily biodegradable. - MSDS supplier
Isotridecanol, ethoxylated (100%) : Ultimate aerobic biodegradability - 28days (OECD 301 B): > 60 %. Easily biodegradable. - MSDS

supplier
Isotridecanol, ethoxylated : COD 2,438 mg/g. - MSDS supplier
Betaines, C12-14 (even numbered)-alkyldimethyl : Biodegradability - 28days (OECD 301B): 63 - 79 %. Easily biodegradable. - MSDS supplier
Betaines, C12-14 (even numbered)-alkyldimethyl (30%) : Biodegradability . Surfactant(s) contained in this preparation comply with biodegradability criteria as defined in (EC) regulation n° 648/2004 on detergents. - MSDS supplier
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine : Biodegradability - 28days (OECD 302B Zahn - Wellens test): 91 %. - MSDS supplier
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine : Biodegradability - 28days (OECD 301D): 79 %. Easily biodegradable. - MSDS supplier

Bioaccumulation
Ethylenediamine tetraacetic acid tetrasodium salt (40%) : . Not bioaccumulative considering that BCF<100 and log Pow<3 - MSDS supplier

Behaviour in environment
Isotridecanol, ethoxylated : . Introduction of small concentrations in water treatment plants does not disturb the biological action cycle of activated sludge - MSDS supplier

Mix related data: :

Acute toxicity
fishes . No data available.
daphnia . No data available.
algae . No data available.

Chronic toxicity
. No data available.

Degradability
. The surface agents contained in this mix are in line with the requirements of the Detergent Regulation 648/2004/EC.

Bioaccumulation
. No data available.

Mobility
. No data available.

Conclusion :
The mixture is considered to be dangerous for the environment according to 1272/2008/EC Regulation.

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

12.6 Endocrine disrupting properties

Not concerned

12.7. Other adverse effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Treatment of the mixture :
Do not discharge the product directly to sewer or to environment.
Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

Packaging treatment :
Rinse thoroughly the packaging with water and treat the effluent like wastes.
Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

SECTION 14: TRANSPORT INFORMATION

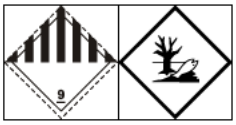
ROAD TRANSPORT: Rail/Route (RID/ADR)

14.1 UN no : 3082

14.2 UN proper shipping name :
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S. (N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)

14.3 Transport hazard class(es) : 9

14.4 Packing group : III
Hazard identification number : 90
Label : 9



Tunnel code : (-)

14.5 Environmental hazard : Yes (N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)

14.6 Special precautions for user : No information.

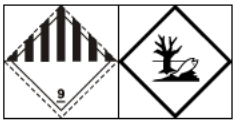
Limited Quantity (QL): 5L

MARITIME TRANSPORT : IMDG

14.1 UN no :3082

14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S. (N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)

14.3 Transport hazard class(es) : 9



14.4 Packing group : III

14.5 Environmental hazard
Marine pollutant : Yes (N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine)

14.6 Special precautions for user : No information.
EmS number : F-A, S-F

Limited Quantity (QL): 5L

14.7 Maritime transport in bulk according to IMO instruments : Not concerned

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EU) n°528/2012 concerning the making available on the market and use of biocidal products :
Not concerned

Regulations relating to the hazards from major accidents :
SEVESO 3 Directive (2012/18/EC) : E1

Regulations relating to the classification, packaging and labelling of substances and mixtures :
Regulation (EC) 1272/2008 amended.

Waste regulations :
2008/98/EC Directive amended by 2015/1127/EC Directive - Regulation 1357/2014/EC
Decision 2014/955/EC which establishes the list of hazardous waste.

Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals : Not concerned

Protection of workers :
Directive 98/24/EC of 07/04/1998 on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EU) 2019/1021 of 20 June 2019 on persistent organic pollutants : Not applicable

Regulation (EC) 1005/2009 amended on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors:
Not concerned

Regulation (EC) 648/2004 :
In conformity with the regulation in force on detergents: Regulation (EC) N° 648/2004.
Ingredient datasheet for the medical staff is available upon written request.
Contains :
< 5% EDTA and salts thereof, Anionic surfactants, Amphoteric surfactants, Non-ionic surfactants
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine, Disinfectants

Comply with national and local legislation.

UN Globally Harmonised System (GHS) on Classification and Labelling of Chemical (GB CLP - SI 2020 No. 1567) and UK REACH (SI 2020 No. 1577)

15.2. Chemical safety assessment

This safety data sheet has been drafted taking into account the information from exposure scenarios for the substances making up the mixture.

SECTION 16: OTHER INFORMATION

The safety data sheet is additional to the technical data sheet but does not replace it. The information given here in is to the best of our knowledge correct and is given in good faith. We must also draw the user's attention on potential risks of the product is used for other purposes for which the product is known.
In no way does it exempt users from being aware of and complying with regulations applicable to their activity. It is their sole responsibility to take all necessary precautions in accordance to the usage of the product they are aware of.
Regulations are only stated in order to help users fulfill the duties involved in the use of the product.
This description should not be considered as exhaustive. It does not exempt users from ensuring if other demands need to be complied with-according to other laws than the ones hereby stated and applicable to holding and usage of the product-demands for which they will remain sole responsibility.

Section(s) modified compared with the previous version :
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

List of H phrases referred to in section 3 :
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H314 : Causes severe skin burns and eye damage.
H318 : Causes serious eye damage.

H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
H373 : May cause damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Sources of key data used to compile the data sheet :
MSDS supplier

Historical :
Version 7.0.1
Cancels and replaces previous version 7.0.

SAFETY DATA SHEET
NIPAC

According to Regulation (EC) No. 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name NIPAC

Product number HLN1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Detergent. For professional use only.

Uses advised against Not for use by hand. Not for direct contact with Food or Beverage stuffs. Not for Direct Oral Consumption. Must not be used where Hypochlorite based chemicals (Bleach) are present. Must not be used in contact with Copper or its Alloys.

1.3. Details of the supplier of the safety data sheet

Supplier Holchem Laboratories Limited
Gateway House, Pilsworth Road,
Pilsworth Industrial Estate,
Bury, Lancashire (UK)
BL9 8RD

+44 (0) 1706 222288
+44 (0) 1706 221550
info@holchem.co.uk

1.4. Emergency telephone number

Emergency telephone Out of Office Hours Emergency Information:-
For accidents and spillages involving this product that pose a threat to the environment, or human health, or require immediate first aid advice call:- +44(0) 7050 265597.
Note:- This number will not accept order queries or calls dealing with equipment breakdowns. This product is registered with the NPIS. UK Environment Agency 24hour Advisory Service 0800 807060. Irish Environmental Protection Agency 1890 335599.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Met. Corr. 1 - H290

Health hazards Skin Corr. 1A - H314 Eye Dam. 1 - H318

Environmental hazards Not Classified

2.2. Label elements

NIPAC

Pictogram



Signal word	Danger
Hazard statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Precautionary statements	P234 Keep only in original container. P280 Wear protective clothing, gloves, eye and face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/attention. P501 Dispose of contents/container in accordance with national regulations.
Contains	NITRIC ACID
Detergent labelling	< 5% phosphates
Supplementary precautionary statements	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P404 Store in a closed container.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

NITRIC ACID **30-60%**

CAS number: 7697-37-2 EC number: 231-714-2

Classification	Classification (67/548/EEC or 1999/45/EC)
Ox. Liq. 3 - H272 Met. Corr. 1 - H290 Skin Corr. 1A - H314	O; R8. C; R35

PHOSPHORIC ACID **1-5%**

CAS number: 7664-38-2 EC number: 231-633-2 REACH registration number: 01-2119485924-24

Classification	Classification (67/548/EEC or 1999/45/EC)
Met. Corr. 1 - H290 Skin Corr. 1B - H314	C;R34.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments To the best of our knowledge, all of the substances used in this product are being supported for the relevent application in REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

NIPAC

General information	When it is safe to do so, remove victim immediately from source of exposure. However, consideration should be given as to whether moving the victim will cause further injury.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Get medical attention.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention.
Skin contact	Remove contaminated clothing that is not stuck to the skin. Flush area with clean water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information	The information given here relates to the neat chemical, dilutions may also cause chemical burns to skin and permanent eye damage.
Inhalation	Inhalation of neat product is unlikely. However, inhalation of mists or vapours of diluted product may result in soreness, irritation or burns to the mouth, nose and respiratory tract. If mixed with Hypochlorite based products (Bleach) Chlorine Gas may be evolved, this can result in irritation to eyes and difficulty in breathing. If inhaled this may result in irritation to the mouth, nose and respiratory tract.
Ingestion	Unlikely route of exposure without deliberate abuse. If neat chemical is ingested, chemical burning of mouth, throat and GI tract will occur. Similar but less severe symptoms will be seen if dilute chemical is ingested.
Skin contact	Causes severe burns.
Eye contact	Extreme pain and blurred vision. May result in permanent eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Rinse well with water to neutral pH. If mixed with Copper and its alloys toxic NO(x) gas is produced. If mixed with bleach will produce Chlorine Gas, check for respiratory disorders.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	This product is non combustible, on heating corrosive vapours may be formed. In contact with some metals (Aluminium, Zinc and their Alloys) Hydrogen Gas is formed, which may form an explosive mixture with air. Contact with Sodium Hypochlorite liberates toxic Chlorine Gas. Toxic gases are formed when in contact with Copper and its Alloys (Brass).

5.3. Advice for firefighters

Protective actions during firefighting	Protective clothing and respiratory protection should be worn when tackling fires involving this product. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

NIPAC

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections See sections 8,12 & 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist. Read and follow manufacturer's recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Store between -10 and +40 Degrees C. Store away from:- Chlorinated Detergents and Disinfectants.

7.3. Specific end use(s)

Specific end use(s) Acidic Detergent, Descaler. Refer to Product Information Sheet for use instructions.

Usage description This product is suitable for use in food and beverage processing plants, but it is not designed for direct food contact.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

NITRIC ACID

Short-term exposure limit (15-minute): 1 ppm 2.6 mg/m3

PHOSPHORIC ACID

Long-term exposure limit (8-hour TWA): WEL 1 mg/m³
Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

NIPAC

Ingredient comments

As a requirement of REACH we have considered all of the components of this formulation. We believe that Nitric Acid is the most hazardous component of this formulation. Nitric Acid is not expected to be systemically available to the body under normal handling and use conditions, therefore systemic effects after Dermal exposure are not expected. Based on data from our suppliers, we believe that if the risk management measures outlined in section 8.2 are followed users will comply with the requirements of REACH for the expected use of this product. Where an exposure level is quoted, a risk assessment should consider if there is a need to monitor the atmosphere of the working environment. Results should be compared against the WEL and/or DNEL information provided. The Long Term WEL refers to total exposure of a worker to a specific substance averaged out over an 8 hour period.
The Short Term WEL refers to a single exposure of a worker to a specific substance over a 15 minute period.
If the Short Term WEL is exceeded and no Long Term Limit is set, further exposure during the working shift is not permitted. Further controls should be implemented to ensure that future exposure to the substance is reduced below the levels set before the activity is repeated/continued. Where no Short Term WEL exists, guidance from the HSE is to use a value of three times the Long Term WEL.
The WEL limits are laid down in the EH40 list as supplied by the HSE. This is taken from the Chemical Agents Directive (98/24/EC). Where a worker is exposed to levels approaching a limit, further exposure control measures should be considered to reduce exposure to the substance. Where new information becomes available under REACH, this will be passed on as revisions to the Safety Data Sheet.

NITRIC ACID (CAS: 7697-37-2)

DNEL

Professional - Inhalation; Long term local effects: 1.3 mg/m³
Professional - Inhalation; Acute local effects: 2.6 mg/m³

PHOSPHORIC ACID (CAS: 7664-38-2)

DNEL

- Inhalation; Long term local effects: 2.92 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

If use of this product generates dust, mists, vapours or fumes, process enclosures or local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits quoted in this msds or other data sources.

Personal protection

The PPE indicated above is not a COSHH assessment. It represents PPE that should be considered during the manufacture, distribution, use and final disposal stages of this product's life cycle. It is the responsibility of employers to conduct a COSHH/risk assessment to determine appropriate PPE levels. The information given below should be used to support this assessment. Where possible replace manual processes with automated or closed processes to minimise contact with the product.

Eye/face protection

The following protection should be worn: Full face visor or shield. Refer to EN Standard 166 to select appropriate level of protection.

Hand protection

Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC). Refer to Standard EN 374.

NIPAC

Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible. Reference to EN 13832 and EN 943 is useful when selecting footwear and clothing.
Hygiene measures	Provide eyewash station and safety shower. Promptly remove non-impervious clothing that has become contaminated, provided it is not adhered to the skin. Contaminated clothing and shoes must be discarded.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.
Environmental exposure controls	Do not allow the substance to contaminate surface water/ground water. See points 6, 12 &13. Discharge of solutions into effluent systems (including municipal drains) or to surface water are expected to cause significant pH changes. Discharge of solutions should be carried out such that pH changes are minimised. Where necessary pH buffering measures should be adopted.
General Health and Safety Measures.	The above classification relates to the neat product. At 5% this product would be classified as H315 (Skin Irrit 2) and H318 (Eye Damage 1). A risk assessment should be performed, but we recommend use of gloves and eye/face protection.A full Risk Assessment should be carried out before handling any chemical(s). Risk Assessments should refer to COSHH, and any other relevant legislation or industry specific guidelines governing the use of chemicals.Note mixing use solutions with Sodium Hypochlorite based products such as Bleach will produce toxic chlorine gas.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless to pale yellow.
Odour	Pungent. Acidic.
Odour threshold	Not available.
pH	pH (concentrated solution): 0 - 1 pH (diluted solution): 1 - 2 @ 1%
Melting point	<0 Degrees C
Initial boiling point and range	Not applicable.
Flash point	Not applicable. Contains no Flammable Components
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	1.27 @ 20°C
Bulk density	Not applicable.
Solubility(ies)	Soluble in water.
Partition coefficient	Not applicable. Technically not feasible.
Auto-ignition temperature	Not applicable.

NIPAC

Decomposition Temperature	Not applicable.
Viscosity	Not determined.
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not applicable. Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	Not applicable.
Particle size	Not applicable.
Molecular weight	Not applicable.
Volatility	Not applicable.
Saturation concentration	Not applicable.
Critical temperature	Not applicable.
Volatile organic compound	Not applicable.
Explosive Properties	Not Classified as Explosive
Storage Temperature Range	-10 to +40 degrees C

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Not expected to react when correctly stored and used. Mixing with other chemicals may produce unexpected reactions. Stable under normal temperature conditions and recommended use. Avoid contact with caustic/alkaline material; this will generate heat and potentially corrosive vapour. Avoid contact with Hypochlorite based products; this will produce toxic Chlorine gas. Reaction with Copper and its Alloys will produce a noxious green (NOx) gas.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. - See note 10.6.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Refer to section 10.1. Do not mix with Hypochlorite based chemicals, this will result in the generation of toxic chlorine gas.

10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid	Avoid contact with reducing agents Contact with Hypochlorite based products will liberate Toxic Chlorine Gas. Reaction with Copper and Brass can produce toxic green NOx gases.

10.6. Hazardous decomposition products

Hazardous decomposition products	Toxic gases/vapours/fumes of: Oxides of the following substances: Nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

NIPAC

Respiratory sensitisation

Respiratory sensitisation No evidence of respiratory sensitisation for any component of this formulation.

Skin sensitisation

Skin sensitisation No evidence of skin sensitisation for any component of this formulation.

Carcinogenicity

Carcinogenicity The components of this formulation will not be systemically available in the body under normal conditions of handling. As a consequence it is not expected to cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility The components of this formulation will not be systemically available in the body under normal conditions of use and handling. As a consequence it is not expected to be toxic to the reproductive system or developing foetus.

General information See section 4.2.

Inhalation Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose.

Ingestion May cause chemical burns in mouth, oesophagus and stomach.

Skin contact Causes burns.

Eye contact Risk of serious damage to eyes. May cause permanent eye injury. - See section 4.2.

SECTION 12: Ecological Information

Ecotoxicity This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Acute toxicity - fish This mixture is not classified as toxic to aquatic organisms.
It is advisable to check discharge permits for Phosphate limitations.

12.2. Persistence and degradability

Persistence and degradability This product consists solely of inorganic materials for which biodegradation assessment is not applicable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to bioaccumulate.

Partition coefficient Not applicable. Technically not feasible.

12.4. Mobility in soil

Mobility The product contains substances which are water soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

NIPAC

General information	When handling waste, the safety precautions applying to handling of the product should be considered. Do not mix with other chemicals. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	3264
UN No. (IMDG)	3264
UN No. (ICAO)	3264

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID ...%, PHOSPHORIC ACID)
Proper shipping name (IMDG)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID ...%, PHOSPHORIC ACID)
Proper shipping name (ICAO)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID ...%, PHOSPHORIC ACID)
Proper shipping name (ADN)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID ...%, PHOSPHORIC ACID)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID label	8
IMDG class	8
ICAO class/division	8

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-A, S-B
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80

NIPAC

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation European Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures.
This replaces Directive 67/548/EEC - Classification, Packaging and Labelling of Dangerous Substances and Regulation (EC) No. 453/2010 relating to the Classification, Packaging and Labelling of Dangerous Preparations. Also considered is the REACH Regulation (EC) No.1907/2006.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet (EC) No. 1272/2008 : EU Regulation on Classification, Labelling and Packaging of Substances and Mixtures.
NPIS - National Poisons Information Service.
PBT - Persistent, Bioaccumulative & Toxic.
vPvB - Very Persistent, Very bioaccumulative.
REACH - Registration, Evaluation, Authorisation & restriction of CHemicals (Regulation EC 1907/2006).
DNEL - Derived No Effect Limit.
PNEC - Predicted No Effect Concentration.
COSHH - Control of Substances Hazardous to Health.
Industry - Refers in section 8 to application of the substance in an industrial process.
Professional - Refers in section 8 to application/use of the preparation/product in a skilled trade premises.

General information This document is a Safety Data Sheet, NOT a CoSHH assessment. It is the customer's responsibility to conduct a full CoSHH assessment, taking into account the information held within this document along with other local factors considered in a risk assessment. Only trained personnel should use this material. The Risk and Hazard statements listed below are the full text of abbreviations used in this document. They are not the final classification, for this refer to section 2.

Revision comments MSDS modified to show WEL data in section 8

Revision date 18/09/2015

Risk phrases in full R34 Causes burns.
R35 Causes severe burns.
R8 Contact with combustible material may cause fire.

Hazard statements in full H270 May cause or intensify fire; oxidiser.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

NIPAC

REACH extended MSDS comments	REACH requires that persons handling chemicals should take the necessary risk management measures, in accordance with assessments from manufacturers and importers of chemical substances. The relevent recommendations must be passed along the supply chain. These assessments are generally reported in Exposure Scenarios. Where Exposure Scenarios have been provided for substances used in this product, the relevent information is incorporated into the safety data sheet.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.All composition information is based on suppliers data.

SAFETY DATA SHEET
TRAYCLEAN

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name TRAYCLEAN

Product number HLT9

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Detergent. For professional use only.

Uses advised against Not for direct contact with Food or Beverage stuffs. Not for oral consumption.

1.3. Details of the supplier of the safety data sheet

Supplier UK - Holchem Laboratories Ltd. Gateway House, Pilsworth Road,
Bury, BL9 8RD
Tel : +44 (0) 1706 222288; e-mail info@holchem.co.uk
EU - Kersia Deutschland GmbH, Marie-Curie-Straße 23
53332 Bornheim - Sechtem

1.4. Emergency telephone number

Emergency telephone Emergency Information:-
For accidents and spillages involving this product that pose a threat to the environment, or human health, or require immediate first aid advice call:- +44(0) 1865 407333.
Note:- This number will not accept order queries or calls dealing with equipment breakdowns.
This product is registered with the NPIS. UK Environment Agency 24hour Advisory Service 0800 807060. Irish Environmental Protection Agency 1890 335599 (This is a Lo Call Number)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements NC Not Classified

Precautionary statements P262 Do not get in eyes, on skin, or on clothing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/ attention.

Supplemental label information EUH210 Safety data sheet available on request.

Detergent labelling «115051» «115033»

TRAYCLEAN

Supplementary precautionary statements	P404 Store in a closed container. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Composition comments	To the best of our knowledge, all of the substances used in this product are being supported for the relevent application in REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	When it is safe to do so, remove victim immediately from source of exposure. However, consideration should be given as to whether moving the victim will cause further injury. For immediate First Aid advice in the UK, dial 111.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention.
Skin contact	Remove contaminated clothing that is not stuck to the skin. Flush area with clean water. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information	Prolonged contact may result in dryness of skin. Eye contact may result in redness and stinging discomfort.
Inhalation	Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose.
Ingestion	Unlikely route of exposure without deliberate abuse. There may be soreness and redness of mouth and throat. A soapy taste may be reported. May cause irritation/discomfort to mucous membranes. Similar but less severe symptoms will be seen if dilute chemical is ingested.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Use solutions may cause mild irritation, especially to open cuts and abrasions.
Eye contact	May cause redness and irritation (stinging sensation) to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Contains Chelating Agents and Surfactants in Aqueous Solution.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	On heating irritating fumes may be formed.

TRAYCLEAN

5.3. Advice for firefighters

Protective actions during firefighting Protective clothing and respiratory protection should be worn when tackling fires involving this product. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Reference to other sections See sections 8,12 & 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Refer to section 8. Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist. Read and follow manufacturer's recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Store between 0 and 40 Degrees C.

7.3. Specific end use(s)

Specific end use(s) Detergent, refer to Product Information Sheet for full details.

Usage description This product is suitable for cleaning food process plants, it is not suitable for direct food contact.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Ingredient comments Where an exposure level is quoted, a risk assessment should consider if there is a need to monitor the atmosphere of the working environment. Results should be compared against the WEL and/or DNEL information provided. Where a worker is exposed to levels approaching a limit, further exposure control measures should be considered to reduce exposure to the substance. DNEL and/or PNEC information is supplied by manufacturers of substances in accordance with REACH legislation (Regulation (EC) No 1907/2006) , and is used to provide suitable risk reduction measures to limit exposure of the user of the substance to a non hazardous level. If the measured level of exposure by a route divided by the DNEL for the route is greater than 1, then further exposure controls should be implemented as described in section 8.2. Where new information becomes available under REACH, this will be passed on as revisions to the Safety Data Sheet.

TRAYCLEAN

Alanine, N,N-bis(carboxymethyl) - trisodium salt

DNEL	Professional - Inhalation; Short term systemic effects: 40 mg/m³ Professional - Inhalation; Short term local effects: 40 mg/m³ Professional - Inhalation; Long term local effects: 4 mg/m³
PNEC	- Fresh water; 2 mg/l - STP; 100 mg/l - Soil; 2.5 mg/kg - marine water; 0.2 mg/l - Intermittent release; 1 mg/l

Alkylamine Dicarboxylate (CAS: 90170-42-6)

DNEL	Professional - Inhalation; Long term systemic effects: 97.8 mg/m³ Professional - Dermal; Long term systemic effects: 13.9 mg/kg bw/day
PNEC	- Fresh water; 0.481 mg/l - marine water; 0.0481 mg/l - Intermittent release; 1 mg/l - Sediment (Freshwater); 5.92 mg/kg - Sediment (Marinewater); 0.592 mg/kg - STP; 2.46 mg/l - Soil; 0.901 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls	As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.
Personal protection	The PPE indicated above is not a COSHH assessment. It represents PPE that should be considered during the manufacture, distribution, use and final disposal stages of this product's life cycle. It is the responsibility of employers to conduct a COSHH/risk assessment to determine appropriate PPE levels. The information given below should be used to support this assessment. Where possible replace manual processes with automated or closed processes to minimise contact with the product.
Eye/face protection	Wear approved, tight fitting safety glasses where splashing is probable. Refer to EN Standard 166 to select appropriate level of protection.
Hand protection	Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC). Refer to Standard EN 374 and EN 16523
Other skin and body protection	Wear suitable protective clothing as protection against splashing or contamination. Reference to EN 13832 and EN 943 is useful when selecting footwear and clothing.
Hygiene measures	Provide eyewash station and safety shower. Promptly remove non-impervious clothing that has become contaminated, provided it is not adhered to the skin.
Respiratory protection	No specific recommendation made, but respiratory protection must be used if the general level exceeds the Workplace Exposure Limit.
Environmental exposure controls	Do not allow the substance to contaminate surface water/ground water. See points 6, 12 &13.

TRAYCLEAN

General Health and Safety Measures.	Although this product is unclassified will still recommend use of glasses and gloves when handling the concentrate and diluted working solutions. A full Risk Assessment should be carried out before handling any chemical(s). Risk Assessments should refer to COSHH, and any other relevant legislation or industry specific guidelines governing the use of chemicals.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Colourless to pale yellow liquid.
Odour	No characteristic odour.
pH	pH (diluted solution): 10.5 - 11.5 @ 1%
Melting point	Not applicable.
Initial boiling point and range	Not applicable.
Flash point	Not applicable. Contains no Flammable Components
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	1.03 @20 Degrees C
Bulk density	Not applicable.
Solubility(ies)	Soluble in water.
Partition coefficient	Not applicable. Technically not feasible.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	Not determined.
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising. Not applicable. Contains no Oxidising Components.

9.2. Other information

Refractive index	Not applicable.
Particle size	Not applicable.
Molecular weight	Not applicable.
Volatility	Not applicable.
Saturation concentration	Not applicable.
Critical temperature	Not applicable.

TRAYCLEAN

Volatile organic compound	Not applicable.
Explosive Properties	Not Classified as Explosive
Storage Temperature Range	Store Between 0 and 40 Degrees C

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Not expected to react when correctly stored and used. Mixing with other chemicals may produce unexpected reactions.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. - See note 10.6.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Refer to section 10.1.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Avoid contact with acids. Do not mix with Hypochlorite based chemicals this could result in a hazardous reaction producing heat, CO2 and O2. This product is not compatible with copper or its alloys, slow dissolution of the metal will occur.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. - See section 10.5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Respiratory sensitisation

Respiratory sensitisation No evidence of respiratory sensitisation for any component of this formulation.

Skin sensitisation

Skin sensitisation No evidence of skin sensitisation for any component of this formulation.

Carcinogenicity

Carcinogenicity The components of this formulation will not be systemically available in the body under normal conditions of handling. As a consequence it is not expected to cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility The components of this formulation will not be systemically available in the body under normal conditions of use and handling. As a consequence it is not expected to be toxic to the reproductive system or developing foetus.

General information See section 4.2.

Inhalation Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose. - See section 4.2.

Ingestion Unlikely route of exposure without deliberate abuse. There may be soreness and redness of mouth and throat. A soapy taste may be reported. May cause irritation/discomfort to mucous membranes.

TRAYCLEAN

Skin contact Under normal conditions of use exposure time will be short and the likelihood of causing skin irritation will be very low. Long exposure may result in skin dryness.

Eye contact May cause temporary eye irritation.

SECTION 12: Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish This mixture is not classified as toxic to aquatic organisms, also it contains no components that are classified as toxic to aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability The surfactant(s) used in this preparation complies (comply) with the biodegradability criteria as laid down in the European Detergents Regulation No 648/2004 as amended.

12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to bioaccumulate.

Partition coefficient Not applicable. Technically not feasible.

12.4. Mobility in soil

Mobility The product contains substances which are water soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered. Do not mix with other chemicals.

Disposal methods Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Small volumes of use solution can be disposed of to sewers.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

TRAYCLEAN

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not relevant.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	UK Adoption and Implementation of the UN Globally Harmonised System (GHS) on Classification and Labelling of Chemicals (GB CLP) and considers UK National REACH legislation.
EU legislation	European Regulation (EC) No 1272/2008 (as amended) on Classification, Labelling and Packaging of Substances and Mixtures. Also considered is the REACH Regulation (EC) No.1907/2006 (as amended).

15.2. Chemical safety assessment

Pcs Information

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	(EC) No. 1272/2008 : EU Regulation on Classification, Labelling and Packaging of Substances and Mixtures. NPIS - National Poisons Information Service. vPvB - Very Persistent, Very bioaccumulative. PBT - Persistent, Bioaccumulative & Toxic. REACH - Registration, Evaluation, Authorisation & restriction of CHemicals (Regulation EC 1907/2006). DNEL - Derived No Effect Limit. PNEC - Predicted No Effect Concentration. COSHH - Control of Substances Hazardous to Health. Industry - Refers in section 8 to application of the substance in an industrial process. Professional - Refers in section 8 to application/use of the preparation/product in a skilled trade premises.
General information	To the best of Holchem's knowledge all component parts (listed below) have been registered on the TSCA and approved for use within the United States of America. Sodium polyacrylate .beta.-Alanine, N-(2-carboxyethyl)-N-(2-ethylhexyl)-, monosodium salt Dissolvine GL38

TRAYCLEAN

Revision comments	Amendment to the emergency phone number in Section 1.4.
Revision date	07/11/2021
REACH extended MSDS comments	REACH requires that persons handling chemicals should take the necessary risk management measures, in accordance with assessments from manufacturers and importers of chemical substances. The relevent recommendations must be passed along the supply chain. These assessments are generally reported in Exposure Scenarios. Where Exposure Scenarios have been provided for substances used in this product, the relevent information is incorporated into the safety data sheet.
END OF SAFETY DATA SHEET	

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

SAFETY DATA SHEET
V CLEAN

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name V CLEAN

Product number HLV1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses General Purpose Alkaline Detergent. For professional use only.

Uses advised against Not for direct contact with Food or Beverage stuffs. Not for oral consumption.

1.3. Details of the supplier of the safety data sheet

Supplier UK - Holchem Laboratories Ltd. Gateway House, Pilsworth Road,
Bury, BL9 8RD
Tel : +44 (0) 1706 222288; e-mail info@holchem.co.uk
EU - Kersia Deutschland GmbH, Marie-Curie-Straße 23
53332 Bornheim - Sechtem

1.4. Emergency telephone number

Emergency telephone Emergency Information:-
For accidents and spillages involving this product that pose a threat to the environment, or human health, or require immediate first aid advice call:- +44(0) 1865 407333.
Note:- This number will not accept order queries or calls dealing with equipment breakdowns.
This product is registered with the NPIS. UK Environment Agency 24hour Advisory Service 0800 807060. Irish Environmental Protection Agency 1890 335599 (This is a Lo Call Number)
This product is registered with the Irish National Poison Centre (NPIC at Beaumont Hospital - Dublin). The Poison Centre can be contacted between 8am and 10pm, telephone +00353 1 8092566.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements H315 Causes skin irritation.
H318 Causes serious eye damage.

V CLEAN

Precautionary statements	P280 Wear protective gloves, eye and face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P332+P313 If skin irritation occurs: Get medical advice/ attention. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/ attention.
Contains	ISO TRIDECANOL ALCOHOL ETHOXYLATE, SODIUM HYDROXIDE
Detergent labelling	< 5% amphoteric surfactants, < 5% non-ionic surfactants
Supplementary precautionary statements	P404 Store in a closed container. P501 Dispose of contents/ container in accordance with national regulations.
Labelling notes	Classification based on specific concentration limits of Sodium Hydroxide.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ISO TRIDECANOL ALCOHOL ETHOXYLATE **1-5%**

CAS number: 69011-36-5 | EC number: 931-138-8 | REACH registration number: 02-2119552461-55-0000

Classification
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Aquatic Chronic 3 - H412

SODIUM HYDROXIDE **1 - 3%**

CAS number: 1310-73-2 | EC number: 215-185-5 | REACH registration number: 01-2119457892-27

Classification
Met. Corr. 1 - H290
Skin Corr. 1A - H314
Eye Dam. 1 - H318

BETA-ALANINE, N-(2 CARBOXYETHYL)-N-DODECYL MONO SODIUM SALT **1-5%**

CAS number: 90170-43-7 | EC number: 290-476-8

Classification
Eye Irrit. 2 - H319

The full text for all hazard statements is displayed in Section 16.

Composition comments To the best of our knowledge, all of the substances used in this product are being supported for the relevent application in REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

V CLEAN

General information	For immediate First Aid advice in the UK, dial 111. When it is safe to do so, remove victim immediately from source of exposure. However, consideration should be given as to whether moving the victim will cause further injury.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention.
Skin contact	Remove contaminated clothing that is not stuck to the skin. Flush area with clean water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

General information	Neat product may cause irritation to skin and eyes. Dilute chemical may result in mild irritation to skin. Contact of dilute chemical with eyes should still be treated as outlined above.
Inhalation	Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose.
Ingestion	Unlikely route of exposure without deliberate abuse. If neat chemical is ingested, irritation of the mouth, throat and GI tract may occur. If dilute chemical is ingested some soreness of the mouth, throat and GI tract may occur.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Chemical burns are possible after prolonged contact.
Eye contact	May cause irritation to the eyes. May result in permanent eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Contains, Sodium Hydroxide, Chelants, Polyacrylates and Surfactants in Aqueous Solution Rinse well with water to neutral pH.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	In contact with some metals (Aluminium, Zinc and their Alloys) Hydrogen Gas is formed, which may form an explosive mixture with air. Note - Comment refers to neat product.

5.3. Advice for firefighters

Protective actions during firefighting	Protective clothing and respiratory protection should be worn when tackling fires involving this product. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

V CLEAN

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Avoid or minimise the creation of any environmental contamination.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Reference to other sections See sections 8,12 & 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist. Read and follow manufacturer's recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed. Keep only in the original container. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Store between 0 and 40 Degrees C.

7.3. Specific end use(s)

Specific end use(s) Detergent, refer to Product Information Sheet for full details.

Usage description This product is suitable for use in food and beverage processing plants, but it is not designed for direct food contact.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³
WEL = Workplace Exposure Limit.

V CLEAN

Ingredient comments

Where an exposure level is quoted, a risk assessment should consider if there is a need to monitor the atmosphere of the working environment. Results should be compared against the WEL and/or DNEL information provided. The Long Term WEL refers to total exposure of a worker to a specific substance averaged out over an 8 hour period.
The Short Term WEL refers to a single exposure of a worker to a specific substance over a 15 minute period.
If the Short Term WEL is exceeded and no Long Term Limit is set, further exposure during the working shift is not permitted. Further controls should be implemented to ensure that future exposure to the substance is reduced below the levels set before the activity is repeated/continued. Where no Short Term WEL exists, guidance from the HSE is to use a value of three times the Long Term WEL.
The WEL limits are laid down in the EH40 list as supplied by the HSE. Where a worker is exposed to levels approaching a limit, further exposure control measures should be considered to reduce exposure to the substance. DNEL and/or PNEC information is supplied by manufacturers of substances in accordance with REACH legislation (Regulation (EC) No 1907/2006) , and is used to provide suitable risk reduction measures to limit exposure of the user of the substance to a non hazardous level. If the measured level of exposure by a route divided by the DNEL for the route is greater than 1, then further exposure controls should be implemented as described in section 8.2. Where new information becomes available under REACH, this will be passed on as revisions to the Safety Data Sheet.

SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL

Industry - Inhalation; Long term local effects: 1.0 mg/m³
DNEL data for Professional users is not yet available, but it is assumed to be the same as for Industrial users.
Industry - Dermal; Short term local effects: 2%

PNEC

No information is available for PNEC data for Sodium Hydroxide

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Personal protection

The PPE indicated above is not a COSHH assessment. It represents PPE that should be considered during the manufacture, distribution, use and final disposal stages of this product's life cycle. It is the responsibility of employers to conduct a COSHH/risk assessment to determine appropriate PPE levels. The information given below should be used to support this assessment. Where possible replace manual processes with automated or closed processes to minimise contact with the product.

Eye/face protection

The following protection should be worn: Chemical splash goggles. Refer to EN Standard 166 to select appropriate level of protection.

Other skin and body protection

Provide eyewash station. Wear suitable protective clothing as protection against splashing or contamination. Reference to EN 13832 and EN 943 is useful when selecting footwear and clothing.

Hygiene measures

Promptly remove non-impervious clothing that has become contaminated, provided it is not adhered to the skin. Wash contaminated clothing before reuse. Provide eyewash station and safety shower.

V CLEAN

Respiratory protection	No specific recommendation made, but respiratory protection must be used if the general level exceeds the Workplace Exposure Limit. In the case of dust or aerosol formation (eg spraying), or vapour from hot vessels, use respiratory protection with an approved filter (P2).
Environmental exposure controls	Do not allow the substance to contaminate surface water/ground water. See points 6, 12 &13. Discharge of solutions into effluent systems (including municipal drains) or to surface water are expected to cause significant pH changes. Discharge of solutions should be carried out such that pH changes are minimised. Where necessary pH buffering measures should be adopted. Users of this product should consult local drainage and permitting authorities to ensure that any restrictions or discharge consents are adhered to.
General Health and Safety Measures.	In use solutions are likely to have extreme pH values and should be considered to be classified as H314. This should be considered when selecting control measures and PPE. A full Risk Assessment should be carried out before handling any chemical(s). Risk Assessments should refer to COSHH, and any other relevant legislation or industry specific guidelines governing the use of chemicals. We recommend full protective overalls, gloves and face protection when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Odour	Detergent
Odour threshold	Not applicable.
pH	pH (concentrated solution): >13 pH (diluted solution): 11.5 - 12.5 @1%
Melting point	Not applicable.
Initial boiling point and range	Not applicable.
Flash point	Not applicable. Contains no Flammable Components
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	1.09 @ 20 Degrees C
Bulk density	Not applicable.
Solubility(ies)	Soluble in water.
Partition coefficient	Not applicable. Not technically practical for mixtures.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	Not determined.

V CLEAN

Explosive properties	Not available. Contains no Explosive Components.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not applicable. Contains no Oxidising Components.

9.2. Other information

Refractive index	Not applicable.
Particle size	Not applicable.
Molecular weight	Not applicable.
Volatility	Not applicable.
Saturation concentration	Not applicable.
Critical temperature	Not applicable.
Volatile organic compound	Not applicable.
Explosive Properties	Not Classified as Explosive
Storage Temperature Range	0 to +40 Degrees C

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Not expected to react when correctly stored and used. Mixing with other chemicals may produce unexpected reactions.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. - See note 10.6.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Refer to section 10.1.

10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid	Strong acids. Reaction with Aluminium, Zinc, Tin, Copper or their alloys produces flammable Hydrogen Gas. - Note: reaction relates to neat product.

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. - See section 10.5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Respiratory sensitisation

Respiratory sensitisation	No evidence of respiratory sensitisation for any component of this formulation.

Skin sensitisation

Skin sensitisation	No evidence of skin sensitisation for any component of this formulation.

Carcinogenicity

V CLEAN

Carcinogenicity The components of this formulation will not be systemically available in the body under normal conditions of handling. As a consequence it is not expected to cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility The components of this formulation will not be systemically available in the body under normal conditions of use and handling. As a consequence it is not expected to be toxic to the reproductive system or developing foetus.

General information See section 4.2.

Inhalation Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose. - See section 4.2.

Ingestion Will cause severe irritation to mouth, throat and GI-Tract.

Skin contact Irritating to skin.

Eye contact Risk of serious damage to eyes. May cause permanent eye injury.

Toxicological information on ingredients.

SODIUM HYDROXIDE

Toxicological effects Will cause immediate corrosion of and damage to the GI Tract, Lethal dose in man is approximately 5g.

SECTION 12: Ecological information

Ecotoxicity This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish This mixture is not classified as toxic to aquatic organisms.
Normal use of diluted product is unlikely to pose a risk.
See note 12.0.

Ecological information on ingredients.

SODIUM HYDROXIDE

Acute aquatic toxicity

Acute toxicity - fish No reliable data is available for this substance. Concentrations greater than 10ppm, or a pH value equal to or greater than 10.5 may be fatal to fish and other aquatic organisms. Can cause damage to other aquatic plants. Can cause damage to vegetation.

12.2. Persistence and degradability

Persistence and degradability The surfactant(s) used in this preparation complies (comply) with the biodegradability criteria as laid down in the European Detergents Regulation No 648/2004 as amended.

12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to bioaccumulate.

Partition coefficient Not applicable. Not technically practical for mixtures.

12.4. Mobility in soil

V CLEAN

Mobility The product contains substances which are water soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Do not mix with other chemicals.

Disposal methods Small volumes of use solution can be disposed of to sewers.

SECTION 14: Transport information

14.1. UN number

No information required.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations UK Adoption and Implementation of the UN Globally Harmonised System (GHS) on Classification and Labelling of Chemicals (GB CLP) and considers UK National REACH legislation.

EU legislation European Regulation (EC) No 1272/2008 (as amended) on Classification, Labelling and Packaging of Substances and Mixtures.
Also considered is the REACH Regulation (EC) No.1907/2006 (as amended).

15.2. Chemical safety assessment

Pcs Information

V CLEAN

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	(EC) No. 1272/2008 : EU Regulation on Classification, Labelling and Packaging of Substances and Mixtures. NPIS - National Poisons Information Service. vPvB - Very Persistent, Very bioaccumulative. PBT - Persistent, Bioaccumulative & Toxic. REACH - Registration, Evaluation, Authorisation & restriction of CHemicals (Regulation EC 1907/2006). DNEL - Derived No Effect Limit. PNEC - Predicted No Effect Concentration. COSHH - Control of Substances Hazardous to Health. Industry - Refers in section 8 to application of the substance in an industrial process. Professional - Refers in section 8 to application/use of the preparation/product in a skilled trade premises.
General information	This document is a Safety Data Sheet, NOT a CoSHH assessment. It is the customer's responsibility to conduct a full CoSHH assessment, taking into account the information held within this document along with other local factors considered in a risk assessment. The Risk and Hazard statements listed below are the full text of abbreviations used in this document. They are not the final classification, for this refer to section 2.
Revision comments	Amendment to the emergency phone number in Section 1.4.
Revision date	16/10/2021
Hazard statements in full	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.
REACH extended MSDS comments	REACH requires that persons handling chemicals should take the necessary risk management measures, in accordance with assessments from manufacturers and importers of chemical substances. The relevent recommendations must be passed along the supply chain. These assessments are generally reported in Exposure Scenarios. Where Exposure Scenarios have been provided for substances used in this product, the relevent information is incorporated into the safety data sheet.
END OF SAFETY DATA SHEET	

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **3D TRASAR™ 3DT487**
Substance type: CLP Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Use of the Substance/Mixture	:	COOLING WATER TREATMENT
Identified uses	:	Cooling Water Treatment
Recommended restrictions on use	:	Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

Company : Nalco Ltd.
P.O. BOX 11, WINNINGTON AVENUE
NORTHWICH, CHESHIRE, U.K. CW8 4DX
+44 (0)1606 74488
For Product Safety information please contact:
msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : +44 1618841235
+32-(0)3-575-5555 Trans-European

Date of Compilation/Revision: 27.05.2022
Version Number: 4.1

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1 H290

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H290 May be corrosive to metals.

Precautionary Statements : **Prevention:**
P234 Keep only in original packaging.
Response:
P390 Absorb spillage to prevent material damage.

2.3 Other hazards

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Phosphoric Acid	7664-38-2 231-633-2 01-2119485924-24	Skin corrosion Category 1B; H314 Corrosive to metals Category 1; H290 Skin corrosion Category 1B H314 25 - 100 % Skin irritation Category 2 H315 10 - < 25 % Eye irritation Category 2 H319 10 - < 25 %	5 - < 10
Substances with a workplace exposure limit :			
Sodium Bisulfite	7631-90-5 231-548-0 01-2119524563-42	Nota B Acute toxicity Category 4; H302	0.25 - < 0.5
Hydrogen Peroxide	7722-84-1 231-765-0 01-2119485845-22	Nota B Oxidizing liquids Category 1; H271 Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Skin corrosion Sub-category 1A; H314 Serious eye damage Category 1; H318 Specific target organ toxicity - single exposure Category 3; H335 Oxidizing liquids Category 1 H271 >= 70 % Oxidizing liquids Category 2 H272 50 - < 70 % Skin corrosion Category 1A H314 >= 70 % Skin corrosion Category 1B H314 50 - < 70 % Skin irritation Category 2 H315 35 - < 50 % Serious eye damage Category 1 H318 8 - < 50 % Eye irritation Category 2 H319 5 - < 8 % Specific target organ toxicity - single exposure Category 3 H335 >= 35 %	0.25 - < 0.5

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled	:	Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Depending on combustion properties, decomposition products may include following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions	:	Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	:	Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers. Keep only in original container. Absorb spillage to prevent material damage. Keep away from strong bases. Absorb spillage to prevent material damage. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: CPVC (rigid), EPDM, HDPE (high density polyethylene), Kalrez, LLDPE, Neoprene, Nitrile, Nylon 11, Plexiglass, Polypropylene, Polyvinylidene difluoride, PTFE, PVC, UHMWPE, Viton (R), Welded Stainless Steel 316

Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Brass, Epoxy phenolic resin, Mild steel, Phenolic, Stainless Steel 304, Stainless Steel 316L

7.3 Specific end uses

Specific use(s) : COOLING WATER TREATMENT

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Phosphoric Acid	7664-38-2	TWA	1 mg/m3	UKCOSSTD
		STEL	2 mg/m3	UKCOSSTD
Sodium Bisulfite	7631-90-5	TWA	5 mg/m3	UKCOSSTD
Hydrogen Peroxide	7722-84-1	TWA	1 ppm 1.4 mg/m3	UKCOSSTD
		STEL	2 ppm 2.8 mg/m3	UKCOSSTD

DNEL

Phosphoric Acid	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1 mg/m3
		End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 2 mg/m3
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0.73 mg/m3
Sodium Bisulfite	:	End Use: Workers Exposure routes: Inhalation Potential health effects: long term - systemic Value: 246 mg/m3
Hydrogen Peroxide	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 1.4 mg/m3
		End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - systemic Value: 3 mg/m3

PNEC

Sodium Bisulfite	:	Fresh water Value: 1.09 mg/l
		Marine water Value: 0.11 mg/l

		STP Value: 82.5 mg/l

8.2 Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice.Remove and wash contaminated clothing before re-use.Wash face, hands and any exposed skin thoroughly after handling.
Eye/face protection (EN 166)	:	Safety glasses
Hand protection (EN 374)	:	Recommended preventive skin protection Gloves Nitrile rubber butyl-rubber Breakthrough time: 1 – 4 hours Minimum thickness for butyl-rubber 0.3 mm for nitrile rubber 0.2 mm or equivalent (please refer to the gloves manufacturer/distributor for advise). Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin and body protection (EN 14605)	:	Wear suitable protective clothing.
Respiratory protection (EN 143, 14387)	:	When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type: A-P

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Environmental exposure controls

General advice	:	Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	yellow
Odour	:	None

Flash point	:	Not flammable
pH	:	1.3 - 2.0
Odour Threshold	:	no data available
Melting point/freezing point	:	Melting point/freezing point: -7.4 °C
Initial boiling point and boiling range	:	97.8 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.223 (15.6 °C) 1.2050 - 1.2350 (25 °C)
Solubility(ies)		
Water solubility	:	Complete
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity		
Viscosity, dynamic	:	16.5 mPa.s (23 °C)
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Do not mix with bleach or other chlorinated products – will cause chlorine gas.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature

10.5 Incompatible materials

Materials to avoid : Mild steel
Aluminium
Strong bases

10.6 Hazardous decomposition products

Hazardous decomposition products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus
metal oxides

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Toxicity

Product

Acute oral toxicity	: There is no data available for this product.
Acute inhalation toxicity	: There is no data available for this product.
Acute dermal toxicity	: There is no data available for this product.
Skin corrosion/irritation	: There is no data available for this product.
Serious eye damage/eye irritation	: There is no data available for this product.
Respiratory or skin sensitization	: There is no data available for this product.
Carcinogenicity	: There is no data available for this product.
Reproductive effects	: There is no data available for this product.
Germ cell mutagenicity	: There is no data available for this product.
Teratogenicity	: There is no data available for this product.
STOT - single exposure	: There is no data available for this product.
STOT - repeated exposure	: There is no data available for this product.
Aspiration toxicity	: There is no data available for this product.

Components

Acute oral toxicity : Phosphoric Acid
LD50 rat: > 2,600 mg/kg

Hydrogen Peroxide
LD50 rat: 486 mg/kg

Components

Acute inhalation toxicity : Phosphoric Acid
LC50 rat: 0.962 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Hydrogen Peroxide
LC50 rat: 11 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Components

Acute dermal toxicity : Phosphoric Acid
LD50 rabbit: > 2,000 mg/kg

Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.

Skin : Health injuries are not known or expected under normal use.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact : No symptoms known or expected.

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

Further information : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product

Environmental Effects : This product has no known ecotoxicological effects.

Toxicity to fish	:	96 hrs LC50 Fathead Minnow: 7,175 mg/l Test substance: Product GLP: No 96 hrs NOEC Fathead Minnow: 3,600 mg/l Test substance: Product GLP: No 96 hrs LC50 Rainbow Trout: > 10,000 mg/l Test substance: Product GLP: No 96 hrs NOEC Rainbow Trout: 6,000 mg/l Test substance: Product GLP: No
Toxicity to daphnia and other aquatic invertebrates	:	48 hrs EC50 Ceriodaphnia dubia: 1,103 mg/l Test substance: Product GLP: No 48 hrs LC50 Ceriodaphnia dubia: 1,350 mg/l Test substance: Product GLP: No 48 hrs NOEC Ceriodaphnia dubia: 313 mg/l Test substance: Product Test Type: Immobilization GLP: No 48 hrs NOEC Ceriodaphnia dubia: 625 mg/l Test substance: Product GLP: No
Toxicity to algae	:	no data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	7 d EC25 / IC25 Ceriodaphnia dubia: 376 mg/l Test substance: Product Test Type: Reproduction GLP: No 7 d NOEC Ceriodaphnia dubia: 94 mg/l Test substance: Product Test Type: Reproduction GLP: No 7 d LOEC Ceriodaphnia dubia: 188 mg/l Test substance: Product Test Type: Reproduction GLP: No

Components

Toxicity to fish	:	Sodium Bisulfite 96 h LC50 Fish: 177.8 mg/l Hydrogen Peroxide 96 h LC50 Pimephales promelas (fathead minnow): 16.4 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Phosphoric Acid
48 h EC50 Daphnia magna (Water flea): > 100 mg/l

Hydrogen Peroxide
48 h LC50 Daphnia magna (Water flea): 2.4 mg/l

Components

Toxicity to algae : Phosphoric Acid
72 h EC50 Desmodesmus subspicatus (green algae): > 100 mg/l

Hydrogen Peroxide
72 h EC50 Skeletonema costatum (marine diatom): 1.38 mg/l

12.2 Persistence and degradability

Product

Biodegradability : Result: Biodegradable/Eliminated from aquatic environment

TOTAL ORGANIC CARBON (TOC): 120,000 mg/l (Product)

Biological Oxygen Demand (BOD): 5 d 400 mg/l

Chemical Oxygen Demand (COD): 300,000 mg/l (Product)

Components

Biodegradability : Phosphoric Acid
Result: Not applicable - inorganic

Sodium Bisulfite
Result: Not applicable - inorganic

Hydrogen Peroxide
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
Guidance for Waste Code selection	:	Organic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Air transport (IATA)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	:	Not applicable.
Candidate List of Substances of Very High Concern for Authorisation	:	Not applicable.

INTERNATIONAL REGULATIONS

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds):
NSF Registration number for this product is: 152422
This product is acceptable for treatment of cooling and retort water (G5) in and around food processing areas. This product is acceptable for treating boilers, steam lines, and/or cooling systems (G7) where neither the treated water nor the steam produced may contact edible products in and around food processing areas.

INTERNATIONAL CHEMICAL CONTROL LAWS

CANADA
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

United States TSCA Inventory
On or in compliance with the active portion of the TSCA inventory

NATIONAL REGULATIONS GERMANY

Water contaminating class (Germany)	:	WGK 1 Classification according to AwSV, Annex 1

15.2 Chemical Safety Assessment:

Chemical Safety Assessments have been carried out for these substances.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Corrosive to metals 1, H290	Calculation method

Full text of H-Statements

H271	May cause fire or explosion; strong oxidiser.

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet	:	IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer. The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERIcards, Non European official regulatory data and other data sources.
Prepared By	:	Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Annex: Exposure Scenarios

Exposure Scenario: Cooling Water Treatment

Life Cycle Stage	:	Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sector of use	:	**SU4**	Manufacture of food products
		SU5	Manufacture of textiles, leather, fur
		SU6b	Manufacture of pulp, paper and paper products
		SU6a	Manufacture of wood and wood products
		SU7	Printing and reproduction of recorded media
		SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
		SU9	Manufacture of fine chemicals
		SU 10	Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
		SU11	Manufacture of rubber products
		SU12	Manufacture of plastics products, including compounding and conversion
		SU13	Manufacture of other non-metallic mineral products, e.g. plasters, cement
		SU14	Manufacture of basic metals, including alloys
		SU15	Manufacture of fabricated metal products, except machinery and equipment
		SU16	Manufacture of computer, electronic and optical products, electrical equipment
		SU17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
		SU20	Health services
		SU23	Electricity, steam, gas water supply and sewage treatment
		SU24	Scientific research and development

Contributing scenario controlling environmental exposure for:

Environmental release category	:	**ERC4**	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	:	1000 kg	
Type of Sewage Treatment Plant	:	none	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC8a**	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	:	15 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC3**	Use in closed batch process (synthesis or formulation)
Exposure duration	:	60 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC15**	Use as laboratory reagent
Exposure duration	:	60 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC28**	Manual maintenance (cleaning and repair) of machinery
Exposure duration	:	240 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	1
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **NALCO® 93033**
Substance type: CLP Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Use of the Substance/Mixture	:	BIOCIDE
Identified uses	:	Cooling Water Treatment Paper Process aid staying in process water
Recommended restrictions on use	:	Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

Company	:	Nalco Ltd. NORTHWICH, CHESHIRE, U.K. CW8 4DX +44 (0)1606 74488 For Product Safety information please contact: msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number	:	+44 1618841235 +32-(0)3-575-5555 Trans-European

Date of Compilation/Revision: 18.03.2021
Version Number: 3.1

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1	H290
Skin corrosion, Category 1	H314
Serious eye damage, Category 1	H318
Acute aquatic toxicity, Category 1	H400
Chronic aquatic toxicity, Category 2	H411

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements	:	H290	May be corrosive to metals.
		H314	Causes severe skin burns and eye damage.
		H410	Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements	:	EUH031	Contact with acids liberates toxic gas.
Precautionary Statements	:	**Prevention:**	
		P273	Avoid release to the environment.
		P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
		Response:	
		P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
		P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
		P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:
Sodium Hypochlorite

2.3 Other hazards

Mixing this product with acid or ammonia releases chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Sodium Hypochlorite	7681-52-9 231-668-3 01-2119488154-34	Nota B Skin corrosion Sub-category 1B; H314 Serious eye damage Category 1; H318 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410 Corrosive to metals Category 1; H290 EUH031 >= 5 % M = 10 M(Chronic) = 1	10 - < 20
Substances with a workplace exposure limit :			
Sodium Hydroxide	1310-73-2 215-185-5 01-2119457892-27	Skin corrosion Category 1A; H314 Corrosive to metals Category 1; H290 Skin corrosion Category 1A H314 >= 5 % Skin corrosion Category 1B H314 2 - < 5 % Skin irritation Category 2	0.25 - < 0.5

		H315 0.5 - < 2 % Eye irritation Category 2 H319 0.5 - < 2 %	

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled : Remove to fresh air.
Treat symptomatically.
Get medical attention if symptoms occur.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Use a mild soap if available.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Get medical attention immediately.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical attention immediately.

If swallowed : Rinse mouth with water.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
If conscious, give 2 glasses of water.
Get medical attention immediately.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Exposure to decomposition products may be a hazard to health.

Hazardous combustion : Depending on combustion properties, decomposition products

products	may include following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions	:	Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	:	Do not ingest. Do not breathe spray, vapour. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after

handling. Use only with adequate ventilation. Mixing this product with acid or ammonia releases chlorine gas.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Absorb spillage to prevent material damage. Keep only in original container.

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: HDPE (high density polyethylene), Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

Unsuitable material :

Aluminium, Mild steel

7.3 Specific end uses

Specific use(s) : BIOCIDE

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Sodium Hydroxide	1310-73-2	STEL	2 mg/m3	UKCOSSTD

DNEL

Sodium Hydroxide	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1 mg/m3
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1 mg/m3

8.2 Exposure controls

Appropriate engineering controls

Effective exhaust ventilation system.
Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety

practice.Remove and wash contaminated clothing before re-use.Wash face, hands and any exposed skin thoroughly after handling.Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166)	:	Safety goggles Face-shield
Hand protection (EN 374)	:	Recommended preventive skin protection Gloves Nitrile rubber butyl-rubber Breakthrough time: 1 – 4 hours Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves manufacturer/distributor for advise). Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin and body protection (EN 14605)	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes
Respiratory protection (EN 143, 14387)	:	When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type: P

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Environmental exposure controls

General advice	:	Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Liquid
Colour	:	Yellow
Odour	:	Pungent
Flash point	:	Not applicable.
pH	:	13.5, 100 %
Odour Threshold	:	no data available
Melting point/freezing point	:	Freezing Point: -16 °C, <
Initial boiling point and boiling	:	no data available

range		
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	17.5 mm Hg (20 °C)
Relative vapour density	:	no data available
Relative density	:	1.22 (20 °C)
Solubility(ies)		
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity		
Viscosity, dynamic	:	2.65 mPa.s (20 °C)
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Mixing this product with acid or ammonia releases chlorine gas.

10.4 Conditions to avoid

10.5 Incompatible materials

Materials to avoid : Strong acids
Aluminum
Mild steel

10.6 Hazardous decomposition products

Hazardous decomposition products	:	Depending on combustion properties, decomposition products may include following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Toxicity

Product

Acute oral toxicity	:	There is no data available for this product.
Acute inhalation toxicity	:	There is no data available for this product.
Acute dermal toxicity	:	There is no data available for this product.
Skin corrosion/irritation	:	There is no data available for this product.
Serious eye damage/eye irritation	:	There is no data available for this product.
Respiratory or skin sensitization	:	There is no data available for this product.
Carcinogenicity	:	There is no data available for this product.
Reproductive effects	:	There is no data available for this product.
Germ cell mutagenicity	:	There is no data available for this product.
Teratogenicity	:	There is no data available for this product.
STOT - single exposure	:	There is no data available for this product.
STOT - repeated exposure	:	There is no data available for this product.
Aspiration toxicity	:	There is no data available for this product.

Components

Acute oral toxicity	:	Sodium Hypochlorite LD50 rat: 5,230 mg/kg

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns.
Ingestion	:	Causes digestive tract burns.

Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough
Further information	:	no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product

Environmental Effects	:	Very toxic to aquatic life with long lasting effects.
Toxicity to fish	:	no data available
Toxicity to daphnia and other aquatic invertebrates	:	no data available
Toxicity to algae	:	no data available

Components

Toxicity to fish	:	Sodium Hypochlorite 96 h EC50: 0.14 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates	:	Sodium Hypochlorite 48 h EC50: 0.071 mg/l Sodium Hydroxide 48 h EC50: 40 mg/l

12.2 Persistence and degradability

Product

no data available

Components

Biodegradability	:	Sodium Hypochlorite Result: Not applicable - inorganic Sodium Hydroxide Result: Not applicable - inorganic

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
Guidance for Waste Code selection	:	Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number:	UN 1791
14.2 UN proper shipping name:	HYPOCHLORITE SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	Yes
14.6 Special precautions for user:	Not applicable.

Air transport (IATA)

14.1 UN number:	UN 1791
14.2 UN proper shipping name:	HYPOCHLORITE SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	Yes
14.6 Special precautions for user:	Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number:	UN 1791
14.2 UN proper shipping name:	HYPOCHLORITE SOLUTION (Sodium Hypochlorite)
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	Yes (Marine Pollutant)
14.6 Special precautions for user:	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	:	ENVIRONMENTAL HAZARDS E1 Lower tier : 100 t Upper tier : 200 t

INTERNATIONAL REGULATIONS

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act
When use situations necessitate compliance with FDA regulations, this product is acceptable under: 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

The product is not registered with the US Environmental Protection Agency under The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and cannot be used in the USA as a pesticide/slimicide; hence, this product cannot be commercially sold in the USA. The above FDA information is provided as guidance only. Limitations: no more than required to produce intended technical effect. Paper and paperboard manufactured with this additive may be used in contact with all food types under conditions of use A-H and J as described within 21 CFR 176.170(c), Tables 1 and 2.

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds):
NSF Registration number for this product is: 141254

This product is acceptable for treating boilers, steam lines, and/or cooling systems (G7) where neither the treated water nor the steam produced may contact edible products in and around food processing areas.

INTERNATIONAL CHEMICAL CONTROL LAWS

United States TSCA Inventory
On or in compliance with the active portion of the TSCA inventory

NATIONAL REGULATIONS GERMANY
Water contaminating class (Germany) : WGK 2
Classification according to AwSV, Annex 1

FEDERAL INSTITUTE FOR RISK ASSESSMENT (BfR) RECOMMENDATION
Acceptable Sections: In compliance with recommendation BfR XXXVI
Limitation Value: 0.18 %
Limit. Value Comment: product based on dry fiber
Remarks: When used as a slimicide employed prior to the sheet forming operation in the manufacture of paper and paperboard. Manufactured paper, tissue, board, and cardboard used for packaging materials, is allowed to be in direct contact with dry, moist, and fatty foodstuffs When used as intended the final paper product would be compliant with the European Commission Framework Regulation 1935/2004

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Corrosive to metals 1, H290	Based on product data or assessment
Skin corrosion 1, H314	Based on product data or assessment
Serious eye damage 1, H318	Based on product data or assessment
Acute aquatic toxicity 1, H400	Calculation method
Chronic aquatic toxicity 2, H411	Calculation method

Full text of H-Statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; ECx – Concentration associated with x% response; ELx – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErCx – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research

on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO – International Maritime Organization; ISHL – Industrial Safety and Health Law (Japan); ISO – International Organisation for Standardization; KECI – Korea Existing Chemicals Inventory; LC50 – Lethal Concentration to 50 % of a test population; LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL – International Convention for the Prevention of Pollution from Ships; n.o.s. – Not Otherwise Specified; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; NZIoC – New Zealand Inventory of Chemicals; OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS – Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR – (Quantitative) Structure Activity Relationship; REACH – Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet	:	IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer. The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERIcards, Non European official regulatory data and other data sources.
Prepared By	:	Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Annex: Exposure Scenarios

Exposure Scenario: Cooling Water Treatment

Life Cycle Stage	:	Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sector of use	:	**SU4**	Manufacture of food products
		SU5	Manufacture of textiles, leather, fur

SU6b	Manufacture of pulp, paper and paper products
SU6a	Manufacture of wood and wood products
SU7	Printing and reproduction of recorded media
SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
SU9	Manufacture of fine chemicals
SU 10	Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
SU11	Manufacture of rubber products
SU12	Manufacture of plastics products, including compounding and conversion
SU13	Manufacture of other non-metallic mineral products, e.g. plasters, cement
SU14	Manufacture of basic metals, including alloys
SU15	Manufacture of fabricated metal products, except machinery and equipment
SU16	Manufacture of computer, electronic and optical products, electrical equipment
SU17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU20	Health services
SU23	Electricity, steam, gas water supply and sewage treatment
SU24	Scientific research and development

Contributing scenario controlling environmental exposure for:

Environmental release category	:	**ERC4**	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	:	1000 kg	
Type of Sewage Treatment Plant	:	none	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC8a**	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	:	15 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	

General ventilation		Ventilation rate per hour: 1
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

Contributing scenario controlling worker exposure for:

Process category	:	**PROC3** Use in closed batch process (synthesis or formulation)
Exposure duration	:	60 min
Operational conditions and risk management measures	:	Indoor
		Local Exhaust Ventilation is not required
General ventilation		Ventilation rate per hour: 1
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

Contributing scenario controlling worker exposure for:

Process category	:	**PROC15** Use as laboratory reagent
Exposure duration	:	60 min
Operational conditions and risk management measures	:	Indoor
		Local Exhaust Ventilation is not required
General ventilation		Ventilation rate per hour: 1
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

Contributing scenario controlling worker exposure for:

Process category	:	**PROC28** Manual maintenance (cleaning and repair) of machinery
Exposure duration	:	240 min
Operational conditions and risk management measures	:	Indoor
		Local Exhaust Ventilation is not required
General ventilation		Ventilation rate per hour: 1
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

Exposure Scenario: Paper Process aid staying in process water

Life Cycle Stage	:	Industrial uses: Uses of substances as such or in preparations at industrial sites	
Sector of use	:	**SU6b**	Manufacture of pulp, paper and paper products

Contributing scenario controlling environmental exposure for:

Environmental release category	:	**ERC4**	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	:	1000 kg	
Type of Sewage Treatment Plant	:	Standard STP	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC8a**	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	:	15 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	3
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC2**	Use in closed, continuous process with occasional controlled exposure
Exposure duration	:	60 min	
Operational conditions and risk management measures	:	Indoor	
		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour:	3
Skin Protection	:	see section 8	
Respiratory Protection	:	see section 8	

Contributing scenario controlling worker exposure for:

Process category	:	**PROC15**	Use as laboratory reagent
Exposure duration	:	60 min	
Operational conditions and risk	:	Indoor	

management measures

		Local Exhaust Ventilation with 90% efficiency is required
General ventilation		Ventilation rate per hour: 3
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

Contributing scenario controlling worker exposure for:

Process category	:	**PROC28** Manual maintenance (cleaning and repair) of machinery
Exposure duration	:	240 min
Operational conditions and risk management measures	:	Indoor
		Local Exhaust Ventilation is not required
General ventilation		Ventilation rate per hour: 3
Skin Protection	:	see section 8
Respiratory Protection	:	see section 8

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name: CAUSTIC SODA LIQUOR 32%

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: Industrial use.

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (EC 1272/2008):

Physical hazards: Met. Corr. 1 - H290

Health hazards: Skin Corr. 1A - H314
Eye Dam. 1 - H318

Environmental hazards: Not Classified

Classification (67/548/EEC or 1999/45/EC): C;R35.

Label elements:

Pictogram:



Signal word: Danger

Hazard statements: H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

[cont…]

Precautionary statements: P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/ doctor.
P501 Dispose of contents/ container to …
P260 Do not breathe vapour/ spray.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Contains: Sodium Hydroxide

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures:

Sodium Hydroxide 32-35%
CAS number: 1310-73-2
EC number: 215-185-5
REACH registration number: 012119457892-27-XXXX

Classification: Met. Corr. 1 - H290
Skin Corr. 1A - H314
Eye Dam. 1 - H318

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

4. FIRST AID MEASURES

Description of first aid measures:

General information: In case of exposure to substance or its vapours, obtain special treatment by doctor as soon as possible.

Inhalation: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention.

Ingestion: Do not induce vomiting. Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention immediately. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

Skin contact: Remove contaminated clothing and rinse skin thoroughly with water. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

Eye contact: Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed:

Skin contact: Causes severe burns.

Eye contact: Causes serious eye damage.

Indication of any immediate medical attention and special treatment needed:

Notes for the doctor: Treat symptomatically.

[cont…]

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture:

Specific hazards: Avoid direct contact of this product with water as this can cause a violent exothermic reaction.

Advice for firefighters:

Protective actions during firefighting: Avoid breathing fire gases or vapours. Keep up-wind to avoid fumes. Fight fire from safe distance or protected location.

Special protective equipment for firefighters: Wear chemical protective suit. Use air-supplied respirator, gloves and protective goggles.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Evacuate area.

Environmental precautions: Avoid discharge into drains. Avoid release to the environment. Avoid or minimise the creation of any environmental contamination.

Methods and material for containment and cleaning up:

Methods for cleaning up: Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Wash thoroughly after dealing with a spillage. Do not touch or walk into spilled material. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water.

Reference to other sections: For personal protection, see Section 8. For waste disposal, see Section 13.

7. HANDLING AND STORAGE

Precautions for safe handling:

Usage precautions: Avoid inhalation of vapours/spray and contact with skin and eyes. Provide adequate ventilation. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

Conditions for safe storage, including any incompatibilities:

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store at temperatures between 5°C and 50°C.

Storage class: Corrosive storage.

Specific end use(s):

[cont…]

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits: Sodium Hydroxide

Long-term exposure limit (8-hour TWA): WEL

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

Exposure controls:

Protective equipment:




Eye/face protection: Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection: It is recommended that chemical-resistant, impervious gloves are worn. To protect hands from chemicals, gloves should comply with European Standard EN374. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.

Hygiene measures: Provide eyewash station. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

Respiratory protection: If ventilation is inadequate, suitable respiratory protection must be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Liquid

Colour: Colourless

pH: pH (concentrated solution): 14

Initial boiling point and range: 125°C

Relative density: 1.35 @ 20°C

Other information:

[cont…]

10. STABILITY AND REACTIVITY

Reactivity: Generates heat on addition to water (exothermic). Contact with metals liberates flammable gas. Incompatible with organics.

Chemical stability:

Stability: Stable at normal ambient temperatures and when used as recommended.

Possibility of hazardous reactions: Reacts violently with water.

Conditions to avoid: Avoid heat.

Incompatible materials:

Materials to avoid: Acids. Chlorinated Hydrocarbons Ammonia.

Hazardous decomposition products:

Thermal decomposition or combustion products may include the following substances: Hydrogen.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Toxicological effects: Harmful by inhalation, in contact with skin and if swallowed. Risk of serious damage to eyes.

Skin corrosion/irritation: Causes severe burns.

Serious eye damage/irritation: Risk of serious damage to eyes.

General information: Exposure may cause coughing and wheezing. Nausea and stomach pain may occur.

Inhalation: Vapours irritate the respiratory system. Shortness of breath. Very high concentrations may result in a loss of consciousness.

Ingestion: This product is corrosive.

Skin contact: Causes severe burns.

Eye contact: Causes serious eye damage.

12. ECOLOGICAL INFORMATION

Ecotoxicity: May cause adverse effects in the aquatic environment.

Toxicity:

[cont…]

Persistence and degradability: The product is biodegradable.

Bioaccumulative potential: The product is not bioaccumulating.

Mobility in soil:

Mobility: Soluble in water.

Results of PBT and vPvB assessment:

Other adverse effects:

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

General information: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods: Confirm disposal procedures with environmental engineer and local regulations. Do not allow runoff to sewer, waterway or ground.

14. TRANSPORT INFORMATION

UN number:

UN No. (ADR/RID): 1824

UN No. (IMDG): 1824

UN No. (ICAO): 1824

UN No. (ADN): 1824

UN proper shipping name:

Proper shipping name (ADR/RID): SODIUM HYDROXIDE SOLUTION

Proper shipping name (IMDG): SODIUM HYDROXIDE SOLUTION

Proper shipping name (ICAO): SODIUM HYDROXIDE SOLUTION

Proper shipping name (ADN): SODIUM HYDROXIDE SOLUTION

Transport hazard class(es):

ADR/RID class: 8

ADR/RID classification code: C5

ADR/RID label: 8

IMDG class: 8

ICAO class/division: 8

ADN class: 8

[cont…]

Transport labels:



Packing group:

ADR/RID packing group: II

IMDG packing group: II

ICAO packing group: II

ADN packing group: II

Environmental hazards:

Environmentally hazardous substance/marine pollutant: No.

Special precautions for user:

EmS: F-A, S-B

ADR transport category: 2

Emergency Action Code: 2R

Hazard Identification Number (ADR/RID): 80

Tunnel restriction code: (E)

Transport in bulk according to Annex II of MARPOL and the IBC Code:

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU legislation: Regulation (EC) No 1272/2008 CLP.
Regulation (EC) No 1907/2006 REACH.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Hazard statements in full: H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

[cont…]

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name: MONOPROPYLENE GLYCOL.

Synonyms; trade names: PROPYLENE GLYCOL, PROPAN 1,2 DIOL, DOWCAL 20, DOWCAL N, 1,2 PROPYLENE GLYCOL CARE, PROPYLENE GLYCOL INDUSTRIAL GRADE, MONOPROPYLENE GLYCOL PH, MPG STANDARD, PROPYLENE GLYCOLUSP GRADE, PROPYLENE GLYCOL TECHNICAL GRADE, PROPYLENE GLYCOL USP/EP, KOLLISOLV PG, MONOPROPYLENE GLYCOL USP FCC ED 7, MONOPROPYLENE GLYCOL T, MONOPROPYLENE GLYCOL DOW AGPH, MONOPROPYLENE GLYCOL DOW, MONOPROPYLENE GLYCOL HCS, MPG USP O&G, MPG USP, MONOPROPYLENE GLYCOL USP/EP, SOLV CORR MPG, MONOPROP GLYCOL USP/EP WUXI, MONOPROPYLENE GLYCOL BPC, MONOPROPYLENE GLYCOL BIO.

REACH registration number: 01-2119456809-23-XXXX

CAS number: 57-55-6

EC number: 200-338-0

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: Surface coating. Cleaning agent. Industrial Solvent. Additive for Agrochemicals. Food industry. Fragrance. Cosmetics. Pharmaceuticals. Personal Care. Chemical Intermediate Manufacture of substance. Laboratory reagent. Binder Releasing agent. Antifreeze liquid. Industrial use. Professional use. Consumer use.

Uses advised against: For further information, see attached Product Application Policy.

Company name:

Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (EC 1272/2008):

Physical hazards: Not Classified.

Health hazards: Not Classified.

Environmental hazards: Not Classified.

Environmental: The product is not expected to be hazardous to the environment.

[cont…]

Label elements:

EC number: 200-338-0

Hazard statements: NC Not Classified**.**

Other hazards: This substance is not classified as PBT or vPvB according to current EU criteria.
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Product name: MONOPROPYLENE GLYCOL

REACH registration number: 01-2119456809-23-XXXX

CAS number: 57-55-6

EC number: 200-338-0

Ingredient notes: ATE: Acute Toxicity Estimate. Oral > 20000 mg/kg
ATE: Acute Toxicity Estimate. Dermal > 2000 mg/kg
ATE: Acute Toxicity Estimate. Inhalation 317.042 mg/l 2 hours Dust/Mist

Composition comments: The data shown are in accordance with the latest EC Directives.

4. FIRST AID MEASURES

Description of first aid measures:

General information: Wear protective clothing as described in Section 8 of this safety data sheet.

Inhalation: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention if any discomfort continues.

Eye contact: Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

Most important symptoms and effects, both acute and delayed:

Eye contact: May cause temporary eye irritation.

Indication of any immediate medical attention and special treatment needed:

Notes for the doctor: Treat symptomatically. If in doubt, get medical attention.

[cont…]

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture:

Specific hazards: When heated and in case of fire, toxic vapours/gases may be formed. Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Aldehydes. Alcohols. Ethers. Acids - organic. Oxides of the following substances: Carbon.

Advice for firefighters:

Protective actions during firefighting: No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Do not use water jet as an extinguisher, as this will spread the fire. Contain and collect extinguishing water. Control run-off water by containing and keeping it out of sewers and watercourses. Evacuate area.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Keep unnecessary and unprotected personnel away from the spillage. Keep upwind.

Environmental precautions: Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

Methods and material for containment and cleaning up:

Methods for cleaning up: Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Avoid the spillage or runoff entering drains, sewers or watercourses. Flush contaminated area with plenty of water.

Reference to other sections: Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

[cont…]

7. HANDLING AND STORAGE

Precautions for safe handling:

Usage precautions: Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes.

Conditions for safe storage, including any incompatibilities:

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid exposure to high temperatures or direct sunlight. Container must be kept tightly closed when not in use. Protect from moisture. Suitable container materials: Stainless steel. Aluminium.

Specific end use(s): The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits: Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate
Long-term exposure limit (8-hour TWA): WEL 150 ppm 474 mg/m³ total vapour and particulates
WEL = Workplace Exposure Limit

DNEL: General population - Inhalation; Long term systemic effects: 50 mg/m³
General population - Inhalation; Long term local effects: 10 mg/m³
Workers - Inhalation; Long term systemic effects: 168 mg/m³
Workers - Inhalation; Long term local effects: 10 mg/m³
General population - Dermal; Long term systemic effects: 213 mg/m³
General population - Oral; Long term systemic effects: 85 mg/m³

PNEC: Fresh water; 260 mg/l
Marine water; 26 mg/l - STP; 20000 mg/l
Sediment (Freshwater); 572 mg/kg
Sediment (Marine water); 57.2 mg/kg
Soil; 50 mg/kg
Intermittent release; 183 mg/l

Exposure controls:

Protective equipment:





Appropriate engineering controls: Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

[cont…]

Eye/face protection: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection: The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The selected gloves should have a breakthrough time of at least 2 hours. Butyl rubber. Rubber (natural, latex). Nitrile rubber. Polyethylene. Polyvinyl alcohol (PVA). Polyvinyl chloride (PVC). Neoprene. Thickness: > 0.35 mm To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection: Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures: When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.

Respiratory protection: Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Organic vapour filter. Combination filter, type A2/P2. EN 136/140/141/145/143/149.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Liquid.

Colour: Colourless or various colours.

Odour: Odourless.

Odour threshold: No information available.

pH: Not applicable.

Melting point: <-20°C

Pour Point: < -57°C Read-across data.

Freezing Point: <-20°C

Initial boiling point and range: 184°C @ 760 mm Hg

Flash point: 104°C Pensky-Martens closed cup.

Evaporation rate: 0.01 (butyl acetate = 1)

Evaporation factor: No information available.

Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits: Lower flammable/explosive limit: 2.6% estimated value. Upper flammable/explosive limit: 12.5% estimated value.

Other flammability: No information available.

Vapour pressure: 20 Pa @ 25°C

Vapour density: 2.62 Read-across data.

Relative density: 1.03 - 1.05 @ 20°C

Bulk density: No information available.

Solubility (ies): Soluble in water.

[cont…]

Partition coefficient: log Pow: -1.07
Auto-ignition temperature: >370°C
Decomposition Temperature: No information available.
Viscosity: 43 cSt @ 20°C
Explosive properties: Not considered to be explosive.
Explosive under the influence of a flame: No information available.
Oxidising properties: Does not meet the criteria for classification as oxidising.

Other information:
Refractive index: No information available.
Particle size: No information available.
Molecular weight: No information available.
Volatility: No information available.
Saturation concentration: No information available.
Critical temperature: No information available.
Volatile organic compound: No information available.

10. STABILITY AND REACTIVITY

Reactivity: There are no known reactivity hazards associated with this product.

Chemical stability:
Stability: Stable at normal ambient temperatures and when used as recommended.

Possibility of hazardous reactions: Will not polymerise.

Conditions to avoid: Avoid excessive heat for prolonged periods of time. Protect from moisture.

Incompatible materials:
Materials to avoid: Strong oxidising agents. Strong acids. Strong alkalis.

Hazardous decomposition products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Aldehydes. Alcohols. Ethers. Acids – organic.
Oxides of the following substances: Carbon.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:
Acute toxicity – oral:
Acute toxicity oral (LD_{50} mg/kg): 22,000.0
Species: Rat
Notes (oral LD_{50}): This product has low toxicity. LD_{50} > 20000 mg/kg, Oral, Rat
ATE oral (mg/kg): 22,000.0

Acute toxicity – dermal:
Notes (dermal LD_{50}): LD_{50} > 2000 mg/kg, Dermal, Rabbit

[cont…]

Acute toxicity – inhalation: Notes (inhalation LC_{50}) LC_{50} 317.042 mg/l, 2 hours, Dust/Mist Rat

Skin corrosion/irritation:

Animal data: Not irritating. OECD 404.

Serious eye damage/irritation: May cause temporary eye irritation.

Respiratory sensitisation: No information available.

Skin sensitisation: Not sensitising. Guinea Pig OECD 406.

Germ cell mutagenicity:

Genotoxicity - in vitro: This substance has no evidence of mutagenic properties. Ames test Negative. OECD 473.

Carcinogenicity: No evidence of carcinogenicity in animals studies.

Reproductive toxicity:

Reproductive toxicity – fertility: No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure:

STOT - single exposure: No information available.

Specific target organ toxicity - repeated exposure:

STOT - repeated exposure: No information available.

Aspiration hazard: Based on available data the classification criteria are not met.

Toxicokinetics: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Inhalation: Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion: May cause discomfort if swallowed.

Skin contact: Skin irritation should not occur when used as recommended.

Eye contact: May cause temporary eye irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity: The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Toxicity: Not considered toxic to fish.

Acute aquatic toxicity:

Acute toxicity – fish: LC50, 96 hours: 40613 mg/l, Oncorhynchus mykiss (Rainbow trout)
OECD 203

[cont…]

Acute toxicity – aquatic invertebrates: LC_{50}, 48 hours: 18340 mg/l, Daphnia magna
Ceriodaphnia dubia (water flea)
OECD 202

Acute toxicity - aquatic plants: ErC50, 96 hours: 19000 mg/l, Pseudokirchneriella subcapitata
OECD 201

Acute toxicity – microorganisms: NOEC, 18 hour: > 20000 mg/l,
Pseudomonas putida

Chronic aquatic toxicity:
Chronic toxicity – aquatic invertebrates: NOEC, 7 day: 13020 mg/l,
Ceriodaphnia dubia (water flea)

Persistence and degradability:
Persistence and degradability: The substance is readily biodegradable.
Biodegradation: Degradation >81%: 28 days
OECD 301F
Degradation 96%: 64 days
Biological oxygen demand: BOD5: 1170 mg O_2/l
Chemical oxygen demand: 4700 mg O_2/l

Bioaccumulative potential:
Bioaccumulative potential: The product is not bioaccumulating. BCF: < 0.09, Estimated value.
Partition coefficient: log Pow: -1.07

Mobility in soil:
Mobility: The product is soluble in water.
Adsorption/desorption coefficient: Koc: 2.9 @ 20°C - Log Koc: 0.46 @ 20°C
Henry's law constant: 0.00566 atm m3/mol @ 12°C

Results of PBT and vPvB assessment: This substance is not classified as PBT or vPvB according to current EU criteria.

Other adverse effects: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:
General information: Waste should be treated as controlled waste. Do not puncture or incinerate, even when empty.
Disposal methods: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

[cont…]

14. TRANSPORT INFORMATION

General: The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

UN number: Not applicable.

UN proper shipping name: Not applicable.

Transport hazard class (es): No transport warning sign required.

Packing group: Not applicable.

Environmental hazards:

Environmentally hazardous substance/marine pollutant: No.

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU legislation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 2020/878 of 18 June 2020.

Chemical safety assessment: A chemical safety assessment has been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Abbreviations and acronyms used in the safety data sheet:

ATE: Acute Toxicity Estimate.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

CAS: Chemical Abstracts Service.

DNEL: Derived No Effect Level.

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

Kow: Octanol-water partition coefficient.

LC_{50}: Lethal Concentration to 50 % of a test population.

LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).

PBT: Persistent, Bioaccumulative and Toxic substance.

[cont…]

PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
vPvB: Very Persistent and Very Bioaccumulative.
IARC: International Agency for Research on Cancer.
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
cATpE: Converted Acute Toxicity Point Estimate.
BCF: Bioconcentration Factor.
BOD: Biochemical Oxygen Demand.
EC_{50}: 50% of maximal Effective Concentration.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
LOEC: Lowest Observed Effect Concentration.
DMEL: Derived Minimal Effect Level.
EL50: Exposure Limit 50
hPa: Hectopascal
LL50: Lethal Loading fifty
OECD: Organisation for Economic Co-operation and Development
POW: Octanol-water partition coefficient
SCBA: self-contained breathing apparatus
STP: Sewage Treatment Plant
VOC: Volatile Organic Compounds

Classification abbreviations and acronyms:

Acute Tox. = Acute toxicity
Aquatic Acute = Hazardous to the aquatic environment (acute)
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

SAFETY DATA SHEET

SULPHURIC ACID 98%

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	SULPHURIC ACID 98%
Other means of identification	:	Not applicable.
Recommended use	:	Heavy duty cleaner
Restrictions on use	:	Reserved for industrial and professional use.
Product dilution information	:	Product is sold ready to use.
Company	:	Ecolab New Zealand 2 Daniel Place Te Rapa, Hamilton New Zealand +64 7 958 2319
Emergency telephone number	:	0800 243 622 (0800 CHEMCALL) +64 7 958 2372 (International)
Issuing date	:	04.02.2021

Section: 2. HAZARDS IDENTIFICATION

HSNO Hazard classification

Skin corrosion	:	8.2 B
Serious eye damage	:	8.3 A
Carcinogenicity (Inhalation)	:	6.7 A
Aquatic toxicity (Acute or Chronic)	:	9.1 D

GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Causes severe skin burns and eye damage.
May cause cancer by inhalation.
Harmful to aquatic life.

Precautionary Statements : **Prevention:**
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dusts or mists. Wash skin thoroughly after handling. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection. Use personal protective equipment as required.
Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed

or concerned: Get medical advice/attention. Immediately call a POISON CENTER or doctor/ physician. Specific treatment (see supplemental first aid instructions on this label). Wash contaminated clothing before reuse.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
sulphuric acid	7664-93-9	60 - 100

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : Decomposition products may include the following materials: Sulphur oxides

Special protective equipment : Use personal protective equipment.

for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.
Hazchem Code	:	2P

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not mix with bleach or other chlorinated products – will cause chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Storage temperature	:	0 °C to 45 °C

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
sulphuric acid	7664-93-9	WES-TWA	0.1 mg/m3	NZ OEL

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety goggles Face-shield
Hand protection	:	Wear the following personal protective equipment: Standard glove type. butyl-rubber PVC Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Refer to AS/NZS 1715 and AS/NZS 1716 for selection, use and maintenance of respiratory protective equipment as applicable. An acid gas cartridge may be used.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	light yellow
Odour	:	slight
pH	:	1.0, (100 %)
Flash point	:	Not applicable., Does not sustain combustion.
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	> 100 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.74 - 1.94
Water solubility	:	soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available

Thermal decomposition	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions to avoid	:	None known.
Incompatible materials	:	Bases Metals
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Sulphur oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns.
Ingestion	:	Causes digestive tract burns.
Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Toxicity

Environmental Effects	:	Harmful to aquatic life.

Product

Toxicity to fish	:	no data available
Toxicity to daphnia and other aquatic invertebrates	:	no data available
Toxicity to algae	:	no data available

Components

Toxicity to fish	:	sulphuric acid 96 h LC50: 22 mg/l

Persistence and degradability

Not applicable - inorganic

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste

disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (NZ_DG)

UN number	:	1830
Description of the goods	:	SULPHURIC ACID
Class	:	8
Packing group	:	II
Hazchem Code	:	2P

Sea transport (IMDG/IMO)

UN number	:	1830
Description of the goods	:	SULPHURIC ACID
Class	:	8
Packing group	:	II
Marine pollutant	:	No

Special precautions for user : None

Section: 15. REGULATORY INFORMATION

HSNO Approval Number : HSR002588

HSNO Group Standard : Industrial and Institutional Cleaning Products (Corrosive, Toxic [6.7]) Group Standard 2017.

The components of this product are reported in the following inventories:

United States TSCA Inventory :
All substances listed as active on the TSCA inventory

Canadian Domestic Substances List (DSL) :
All components of this product are on the Canadian DSL.

Australia. Australian Industrial Chemicals Introduction Scheme (AICIS) :
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand :
On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and New Chemical Substances Inventory :
On the inventory, or in compliance with the inventory

Korea. Korean Existing Chemicals Inventory (KECI) :
On the inventory, or in compliance with the inventory

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
On the inventory, or in compliance with the inventory

China Inventory of Existing Chemical Substances :
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory :
On the inventory, or in compliance with the inventory

Section: 16. OTHER INFORMATION

Issuing date	:	04.02.2021
Version	:	1.1
Prepared by	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.