

SAFETY DATA SHEET SODIUM HYPOCHLORITE

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

1.1. Product identifier

Product name SODIUM HYPOCHLORITE

Product number HLH22

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

Identified uses Detergent. Disinfectant.

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)
Ireland - For information or to report a poisoning incident contact The National Poisons Information Centre (01 8092166).

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. 1B - H314 Eye Dam. 1 - H318

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms



Signal word Danger

SODIUM HYPOCHLORITE

Hazard statements	H314 Causes severe skin burns and eye damage. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects. H290 May be corrosive to metals.
Precautionary statements	P234 Keep only in original packaging. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ 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.
Supplemental label information	EUH031 Contact with acids liberates toxic gas.
Contains	SODIUM HYPOCHLORITE SOLUTION, SODIUM HYDROXIDE
Detergent labelling	15 - < 30% chlorine-based bleaching agents
Supplementary precautionary statements	P404 Store in a closed container.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. H290 Phrase relates to soft metal such as Aluminium. When used correctly and rinsed off, typical use solutions will be compatible with high quality stainless steels. If solutions are allowed to dry onto Stainless Steel, corrosion is possible.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SODIUM HYPOCHLORITE SOLUTION	14 - 16%
CAS number: 7681-52-9	EC number: 231-668-3
M factor (Acute) = 10	M factor (Chronic) = 1
Classification Met. Corr. 1 - H290 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	
SODIUM HYDROXIDE	<1%
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.

SODIUM HYPOCHLORITE

Composition comments Note:- Sodium Hypochlorite content expressed as % Available Chlorine in Solution. To the best of our knowledge, all of the substances used in this product are being supported for the relevant application in REACH. The Biocidally Active components of this product are supported in the Biocidal Products Regulation.

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.
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	Neat product may cause chemical burns and permanent eye damage. Dilute product may cause irritation to the skin and eyes.
Inhalation	If mixed with acid products 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. 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	Sodium hypochlorite in an aqueous solution. If mixed with acidic material 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 The product is non-combustible. If heated, corrosive vapours may be formed. Contact with acids will generate toxic chlorine gas. 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

SODIUM HYPOCHLORITE

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 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 -10 and +30 Degrees C Store away from the following materials: Acids. Products containing Chelating/Scale control Agents (examples EDTA, MGDA, NTA).

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 preparation areas

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.

SODIUM HYPOCHLORITE

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 HYPOCHLORITE SOLUTION (CAS: 7681-52-9)

DNEL	Industry - Inhalation; Long term local effects: 1.55 mg/m ³ Industry - Inhalation; Short term systemic effects: 3.1 mg/m ³ Industry - Inhalation; Short term local effects: 3.1 mg/m ³ Industry - Dermal; Long term local effects: 0.5% wt/wt Industry - Inhalation; Long term systemic effects: 1.55 mg/m ³
PNEC	- Intermittent release; 0.26 ug/l - Sediment (Freshwater); 0.21 ug/l - Sediment; 0.042 ug/l - Fresh water; 30 ug/l

SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL	Industry - Inhalation; Long term local effects: 1.0 mg/m ³ 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.

SODIUM HYPOCHLORITE

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	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. 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.
General Health and Safety Measures.	The above requirements refer to the neat chemical. A 2% solution of this product would not be classified, although mixing with Acid based products would still produce Chlorine Gas. Although not classified, we would recommend eye protection if there is a risk of splashing, also use of gloves. 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	Clear liquid.
Colour	Yellow.
Odour	Chlorine.
Odour threshold	Not applicable.
pH	pH (concentrated solution): >13 pH (diluted solution): 11.8 - 12.2 @ 1%
Melting point	<0 Degrees C
Initial boiling point and range	Approximately 100 - 110 Degrees C
Flash point	Not available.
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.

SODIUM HYPOCHLORITE

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	1.26 @ 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.
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 Will produce toxic Chlorine gas in contact with acids.

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.

SODIUM HYPOCHLORITE

10.5. Incompatible materials

Materials to avoid In contact with cellulose based material such as wood or paper a potential for ignition and slow burning exists.

10.6. Hazardous decomposition products

Hazardous decomposition products The normal breakdown of this product will produce Chlorates, Oxygen and Sodium Chloride (salt), under acid conditions Chlorine can be produced. Will evolve Hydrogen Gas when in contact with soft metals such as Aluminium. Will evolve Chlorine Gas in contact with Acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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.

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. Mixing with acid will evolve toxic Chlorine Gas.

Ingestion

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

Toxic to aquatic life with long lasting effects. Normal use is unlikely to pose a risk to the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish

To the best of our current knowledge, the main ecotoxicological effect is due to the Sodium Hypochlorite for which:-

The Fresh Water LC50 (96hr) is 0.06mg/l.

The Marine Water LC50 (96hr) is 0.032 mg/l.

The Fresh Water EC50 (48hr) value for Daphnia magna is 0.141mg/l.

The Marine Water EC50(48hr) value for Crassostrea virginica is 0.026mg/l.

The NOEC (Algae 7 day) Fresh Water 0.0021.

Note in addition to Hypochlorite, high pH has the potential to cause harm to the environment. Effluent pH values greater than 10.5 in fresh water may be fatal to fish and other aquatic organisms. Damage to aquatic plants is also possible.

Normal use is unlikely to pose a risk. - See note 12.

SODIUM HYPOCHLORITE

12.2. Persistence and degradability

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

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 methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. |

Consideration should be given to water authority effluent permits.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1791

UN No. (IMDG) 1791

UN No. (ICAO) 1791

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYPOCHLORITE SOLUTION

Proper shipping name (IMDG) HYPOCHLORITE SOLUTION

Proper shipping name (ICAO) HYPOCHLORITE SOLUTION

Proper shipping name (ADN) HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID label 8

IMDG class 8

ICAO class/division 8

SODIUM HYPOCHLORITE

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



14.6. Special precautions for user

EmS F-A, S-B

Emergency Action Code 2X

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

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.
Also UK Biocides Regulations.

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).
REGULATION (EU) No 528/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 May 2012 concerning the making available on the market and use of biocidal products. [BPR]

15.2. Chemical safety assessment

Pcs Information A solution of Sodium Hypochlorite equivalent to 15% Available Chlorine. Authorisation Holder; Holchem Laboratories Ltd.

Pcs Number PCS No:- 93911

No chemical safety assessment has been carried out.

SECTION 16: Other information

SODIUM HYPOCHLORITE

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.
Revision comments	Amendment to the emergency phone number in Section 1.4.
Revision date	28/10/2021
SDS number	11296
Hazard statements in full	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. H411 Toxic 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 relevant 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 relevant 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.