SAFETY DATA SHEET
OPTIMUM DESTAIN DISHWASH

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

1.1. Product identifier

Product name OPTIMUM DESTAIN DISHWASH

Product number OPTK7

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 oral consumption. Not for direct contact with Food or Beverage stuffs. Must not be used where acid based chemicals 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)

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 Aquatic Acute 1 - H400 Aquatic Chronic 3 - H412

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.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements	P234 Keep only in original packaging. P273 Avoid release to the environment. P280 Wear protective 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.
Supplemental label information	EUH031 Contact with acids liberates toxic gas.
Contains	SODIUM HYDROXIDE, SODIUM HYPOCHLORITE SOLUTION
Detergent labelling	5 - < 15% chlorine-based bleaching agents, < 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. 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

SODIUM HYDROXIDE **10-30%**

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

SODIUM HYPOCHLORITE SOLUTION **5-10%**

CAS number: 7681-52-9	EC number: 231-668-3	REACH registration number: 01-2119488154-34
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

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:- Sodium Hypochlorite content expressed as % Available Chlorine in Solution. Note:- H290 "May be Corrosive to Metals" refers to the neat product.

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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. 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 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. 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 Contains Sodium Hydroxide, Sodium Hypochlorite and Polymeric scale control agents in aqueous solution. Rinse well with water to neutral pH. 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 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. Note - Comment refers to neat product. Contact with acids will generate toxic chlorine gas.

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.

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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. 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. Dike far ahead of larger spills for later disposal. 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 Store in tightly-closed, original container in a well-ventilated place. 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.

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

Occupational exposure limits

SODIUM HYDROXIDE

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

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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

SODIUM HYPOCHLORITE SOLUTION (CAS: 7681-52-9)

DNEL

Industry - Inhalation; Long term local effects: 1.55 mg/m³
Industry - Inhalation; Short term systemic effects: 3.1 mg/m³
Industry - Inhalation; Short term local effects: 3.1 mg/m³
Industry - Dermal; Long term local effects: 0.5% wt/wt
Industry - Inhalation; Long term systemic effects: 1.55 mg/m³

PNEC

- Intermittent release; 0.26 ug/l
- Sediment (Freshwater); 0.21 ug/l
- Sediment; 0.042 ug/l
- Fresh water; 30 ug/l

8.2. Exposure controls

Protective equipment

Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

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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). The expected use of this product is such that gloves with a breakthrough time of >60 minutes should be regarded as sufficient. Gloves should be inspected regularly for damage and replaced when necessary. 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	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 Type B(P3).
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.	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. Mixing either Dilute or Concentrated Solutions with acid may result in the Production of Chlorine Gas. 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	Pale Yellow
Odour	Bleach
Odour threshold	Not applicable.
pH	pH (concentrated solution): >13 pH (diluted solution): 12 - 13 @ 1%
Melting point	Not applicable.
Initial boiling point and range	Not applicable.
Flash point	Not applicable. Contains no Flammable Components
Evaporation rate	Not applicable.

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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	1.24 @ 20°C
Bulk density	Not applicable.
Solubility(ies)	Soluble in water.
Partition coefficient	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. Contains Sodium Hypochlorite. This 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 Degree 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. Decomposes over time to produce Oxygen and Sodium Chloride. - See note 10.6.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Refer to section 10.1.

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10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time. Generates toxic gas in contact with acid.

10.5. Incompatible materials

Materials to avoid Reaction with acids will produce toxic Chlorine Gas. In contact with cellulose based material such as wood or paper a potential for ignition and slow burning exists. 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 Will evolve Hydrogen Gas when in contact with soft metals such as Aluminium. Will evolve Chlorine Gas in contact with Acids. Natural decay (especially in warm conditions or in direct sunlight) will evolve Oxygen Gas.

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 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. Mixing with acid will evolve toxic Chlorine Gas. - See section 4.2.

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 This product is classified as very toxic to aquatic life, this refers to the neat product. Normal use is not expected to pose a risk.

12.1. Toxicity

Toxicity Normal use is not expected to pose an ecological risk.

Acute aquatic toxicity

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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.

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

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

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

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)

1719

UN No. (IMDG)

1719

UN No. (ICAO)

1719

14.2. UN proper shipping name

Proper shipping name (ADR/RID)

CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, SODIUM HYPOCHLORITE SOLUTION, 15% Cl)

Proper shipping name (IMDG)

CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, SODIUM HYPOCHLORITE SOLUTION, 15% Cl)

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Proper shipping name (ICAO)	CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, SODIUM HYPOCHLORITE SOLUTION, 15% Cl)
Proper shipping name (ADN)	CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE, SODIUM HYPOCHLORITE SOLUTION, 15% Cl)

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

14.6. Special precautions for user

EmS	F-A, S-B
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

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).

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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. NOEC - No Observed Effect Concentration. NOAEL - No Observable Adverse Effect Level. LC50 - Lethal Concentration 50 - The environmental contamination at which 50% mortality is reached over a fixed time scale. EC50 - Effective Concentration 50 - Concentration of a substance in water at which 50% of the maximum biological response is reached. 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	28/10/2021
SDS number	25331
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. 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