



SAFETY DATA SHEET M4 DISHWASH DETERGENT

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

1.1. Product identifier

Product name M4 DISHWASH DETERGENT
Product number HLM24

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

Identified uses Caustic 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.
 UK Environment Agency 24hour Advisory Service 0800 807060. This product is registered with the NPIS. 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 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.

M4 DISHWASH DETERGENT

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

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

<p>SODIUM HYDROXIDE 5 - 10%</p> <p>CAS number: 1310-73-2 EC number: 215-185-5 REACH registration number: 01-2119457892-27</p>
<p>Classification</p> <p>Met. Corr. 1 - H290 Skin Corr. 1A - H314 Eye Dam. 1 - H318</p>
<p>POTASSIUM HYDROXIDE 1-5%</p> <p>CAS number: 1310-58-3 EC number: 215-181-3 REACH registration number: 01-2119487136-33</p>
<p>Classification</p> <p>Met. Corr. 1 - H290 Acute Tox. 4 - H302 Skin Corr. 1A - H314 Eye Dam. 1 - H318</p>

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 relevant application in REACH.
-----------------------------	---

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.
----------------------------	--

M4 DISHWASH DETERGENT

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.
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 Polyacrylate in a Sodium Hydroxide solution.
-----------------------------	---

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	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. This product is non combustible, on heating corrosive vapours may be formed.
-------------------------	--

5.3. Advice for firefighters

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

M4 DISHWASH DETERGENT

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

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. Store between 0 and 40 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 use in food preparation areas, but 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

POTASSIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit.

M4 DISHWASH DETERGENT

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.

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

ALKYL IMINO ACID

DNEL	Professional - Inhalation; Long term systemic effects: 980 mg/m ³ Professional - Dermal; Long term systemic effects: 2.67 mg/kg bw/day
PNEC	- Fresh water; 0.1 mg/l - marine water; 0.01 mg/l - Intermittent release; 0.1 mg/l - STP; 0.3 mg/l

8.2. Exposure controls

Protective equipment



M4 DISHWASH DETERGENT

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	This product is not expected to come into contact with eyes during normal usage. If a risk assessment indicates eye contact is reasonable likely eye protection should be considered. 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.
General Health and Safety Measures.	The classification given for this product is for the neat material. Use solutions will be less hazardous, but because pH is expected to be >11.5 they should still be considered as capable of causing severe skin burns and eye damage. Use of Eye Protection and Gloves is recommended as min 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	Amber to Pale Yellow
Odour	No characteristic odour.
Odour threshold	Not applicable.
pH	pH (diluted solution): 11.5 - 12.5 @ 1%v/v

M4 DISHWASH DETERGENT

Melting point	Less than 0 Degrees C
Initial boiling point and range	95 - 110 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	1.11 - 1.18 @ 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.
<u>9.2. Other information</u>	
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 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. The solution is strongly alkaline and reacts with strong acids with heat generation.

10.2. Chemical stability

M4 DISHWASH DETERGENT

Stability Stable at normal ambient temperatures and when used as recommended. - See note 10.6.
Avoid the following conditions: Avoid contact with acids.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Refer to section 10.1. Do not mix with Hypochlorite based chemicals, this could result in a dangerous heating of the solution.

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:- Comment refers to neat product.

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

Acute toxicity - oral

ATE oral (mg/kg) 19,230.77

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.

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.

M4 DISHWASH DETERGENT

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish This mixture is not classified as toxic to aquatic organisms.
See note 12.0.

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.

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

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

M4 DISHWASH DETERGENT

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

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**

M4 DISHWASH DETERGENT

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	01/11/2021
SDS number	25258
Hazard statements in full	H290 May be corrosive to metals. H302 Harmful if swallowed. 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 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.