Product	Chlorinated Machine Dishwash Detergent
Revision date	25 February 2021
Revision	2

Safety Data Sheet (SDS)

according to Regulation (EC) No. 1907/2006

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

1.1 Product identifier

Product name	**Chlorinated Machine Dishwash Detergent**
Product no.	**MDL504**
Other means of identification	No information available.

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

Identified uses	Cleaning agent. For professional use only.
Uses advised against	Any other purpose.

1.3 Details of the supplier of the safety data sheet

Supplier	Kitchenmaster NI Ltd 11 Comber Road Belfast BT8 8AN United Kingdom Tel: 028 90814777
Contact person	sales@kitchenmaster-ni.com

1.4 Emergency telephone number

Emergency telephone	Emergency Telephone Number: 028 9081 4777 08:30 – 17:00 Monday to Thursday 08:30 – 16:30 Friday

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and chemical hazards	Me. Corr 1 - H290
Human health	Skin Corr. 1A - H314
Environment	Not classified

2.2 Label elements

Contains	Sodium hydroxide sodium hypochlorite
Detergent labeling	<5% chlorine-based bleaching agents
Label in accordance with (EC) no. 1272/2008	
Signal word	Danger
Hazard statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Precautionary statements	**Prevention** P260 Do not breathe dust/fume/ gas/mist/vapours/spray.

P264 Wash exposed skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/eye protection/face protection.
Response
P303 + P361 + P353 IF ON SKIN (or hair): Remove/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.
P310 Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards

None known.

Section 3: Composition/information on ingredients

3.1 Substance

Not applicable.

3.2 Mixtures

Name	Product identifier	Regulation (EC) No 1272/2008	%
Sodium hydroxide	CAS-No.: 1310-73-2 EC No.: 215-185-5 REACH Reg No.: 01-2119457892-27-XXXX	Skin Corr. 1A - H314, Me. Corr 1 - H290	5-10%
sodium hypochlorite	CAS-No.: 7681-52-9 EC No.: 231-668-3 REACH Reg No.: 01-2119488154-34-XXXX	Aquatic Acute 1 - H400, Skin Corr. 1B - H314	1-5%

The full text for all hazard statements are displayed in section 16.

Composition comments The data shown are in accordance with the latest EC Directives.
Sodium hydroxide - SCL Skin Corr. 1A: C >= 5%; Skin Corr. 1B: C >= 2 - < 5%; Skin Irrit. 2: C >= 0.5 - < 2%; Eye Irrit. 2: C >= 0.5 - < 2%.
Sodium hypochlorite: Specific Concentration limits = EUH031 >=5%.

Section 4: First aid measures

4.1 Description of first aid measures

General information Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem. First aid personnel must be aware of own risk during rescue.

Inhalation Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Ingestion If this product is ingested, remove victim immediately from source of exposure. Rinse mouth thoroughly. Do not induce vomiting. Provide fresh air, warmth and rest. Get medical attention. Never give anything by mouth to an unconscious person.

Skin contact Remove victim immediately from source of exposure. Remove contaminated clothing, shoes and jewelry and wash before reuse. Wash the skin immediately with water. Obtain medical attention if irritation persists or if blistering occurs.

Eye contact Do not rub eye. If this product contacts the eyes, gently flush eyes with water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if present and easy to do so. Avoid contaminating unaffected eye. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Inhalation of mist or vapor may cause respiratory tract irritation.

Ingestion May cause chemical burns in mouth and throat. May cause severe internal injury.

Skin contact Corrosive. Causes severe skin burns.

Eye contact Extreme irritation of eyes and mucous membranes, including burning and tearing. Corrosive to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to the physician Treat symptomatically.

Section 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media Use fire-extinguishing media appropriate for surrounding materials. This product is not flammable.

Unsuitable extinguishing media High volume water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products When heated, toxic and corrosive vapours/gases may be formed. During fire, toxic gases (CO, CO2) are formed. Decomposition products may include: Chlorine. Hydrogen chloride gas. Chlorine oxides. Hypochlorous acid. Sodium chlorate.

Unusual fire & explosion hazards Flammable hydrogen can form when the product contacts metals.

Specific hazards Water used for fire extinguishing, which has been in contact with the product, may be corrosive. Dried residue promotes combustion of combustible products or materials.

5.3 Advice for firefighters

Special fire fighting procedures If possible, fight fire from protected position. Avoid breathing fire vapours. Ventilate closed spaces before entering them. Containers close to fire should be removed immediately or cooled with water if safe to do so. Keep run-off water out of sewers and water sources. Dike for water control.

Protective equipment for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Eliminate all sources of ignition. Avoid inhalation of vapours and contact with skin and eyes. In case of inadequate ventilation, use respiratory protection. Do not touch or walk through spilled material. If necessary evacuate surrounding areas.

For emergency responders Follow safe handling advice and personal protective equipment recommendations for normal use of product.

6.2 Environmental precautions

Environmental precautions Do not discharge onto the ground or into water courses.

6.3 Methods and material for containment and cleaning up

Spill clean up methods Ventilate and evacuate the area. Eliminate all ignition sources. When dealing with a spillage, wear necessary protective equipment. Stop leak if possible without risk DO NOT touch spilled material!
Absorb spillage with non-combustible, inert absorbent material. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. Wash thoroughly after dealing with a spillage.

6.4 Reference to other sections

Reference to other sections See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handling Read and follow manufacturer's recommendations. Use proper personal protection when handling (refer to Section 8). Do not handle broken packages without protective equipment.

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Do not eat, drink or smoke when using the product. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage precautions Keep upright, locked up and out of reach of children. Keep the product in its original container. Store in cool dry areas away from direct sunlight or sources of ignition. Keep away from oxidizing agents and strong acids. Keep away from incompatible materials (see section 10).

Storage class Corrosive storage.

7.3 Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description Use only according to directions. Replace and tighten cap after use.

Section 8: Exposure controls/Personal protection

8.1 Control parameters

Component	STD	TWA (8 Hrs)		STEL (15mins)		Notes
Sodium hydroxide	OEL				2 mg/m^3	
Sodium hydroxide	WEL				2 mg/m^3	

Ingredient comments Ireland, Occupational Exposure Limits 2020.
WEL - Workplace Exposure Limits - EH40/2005 Workplace exposure limits.

8.2 Exposure Controls

Protective equipment

Engineering measures Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/145/143/149. The specific respirator selected must be based on contamination levels found in the work place.
Where risk assessment shows air-purifying respirators are appropriate a full face respirator conforming to EN143 should be used, and suitable respirator cartridges as a backup to engineering controls. Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK). Consult manufacturer for specific advice.

Hand protection Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374) is recommended. (EU Directive 89/686/EEC). Gloves must be inspected prior to use. Suggested material: Butyl rubber - Layer thickness: 0.11 mm, Breakthrough time: >480 min. Consult manufacturer for advice.
Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Eye protection Wear safety goggles or face shield to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).

Other protection Wear appropriate clothing to prevent skin contact. The selected clothing must satisfy the European norm standard EN 943. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handing this product. Work clothing worn by personnel shall be laundered regularly. After contact with the product, all parts of the body that have been soiled must be washed.

Hygiene measures Observe normal hygiene standards. Wash promptly if skin becomes contaminated. When

	using do not eat, drink or smoke. Wash hands after use.
Process conditions	Ensure that eye flushing systems and safety showers are located close by in the work place.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Clear. Pale straw coloured
Odour	Slight chlorine odour.
Odour threshold - lower	No information available as testing has not been completed.
Odour threshold - upper	No information available as testing has not been completed.
pH-Value, Conc. Solution	>13
pH-Value, Diluted solution	Not applicable as the product is a concentrated solution.
Melting point	No information available as testing has not been completed.
Initial boiling point and boiling range	No information available as testing has not been completed.
Flash point	Non-Flammable
Evaporation rate	No information available as testing has not been completed.
Flammability state	Not applicable as the product is not flammable.
Flammability limit - lower(%)	Not applicable as the product is not flammable.
Flammability limit - upper(%)	Not applicable as the product is not flammable.
Vapour pressure	No information available as testing has not been completed.
Vapour density (air=1)	No information available as testing has not been completed.
Relative density	1.12 - 1.14 kg/l (at 20°C)
Bulk density	Not applicable as the product is a liquid.
Solubility	Soluble in water.
Decomposition temperature	No information available as testing has not been completed.
Partition coefficient; n-Octanol/Water	Not applicable as the product is a mixture.
Auto ignition temperature (°C)	Not applicable as the product is not flammable.
Viscosity	No information available as testing has not been completed.
Explosive properties	Not classified as explosive.
Oxidising properties	The product does not meet the criteria to be classified as oxidising.

9.2 Other information

Molecular weight	Not applicable as the product is a mixture.
Volatile organic compound	No information available as testing has not been completed.
Other information	None noted.

Section 10: Stability and reactivity

10.1 Reactivity

Reactivity	Reaction with: Strong oxidising agents. Acids. This solution can react with certain metals, such as aluminum, to generate flammable hydrogen gas. May decompose violently on mixing with acids, with rapid evolution of chlorine gas.

10.2 Chemical stability

Stability	Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions

Hazardous reactions	Avoid strong oxidizers. Avoid contact with acids. Attacks metals liberating flammable Hydrogen gas. For information on hazardous reactions see section 10.1.
Hazardous polymerisation	Will not polymerise.
Polymerisation description	Not applicable.

10.4 Conditions to Avoid

Conditions to avoid	Heat, sparks, open flames, temperature extremes and direct sunlight.

10.5 Incompatible materials

Materials to avoid	Keep away from acids and oxidants. Avoid contact with metals.

10.6 Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Decomposition products may include: Chlorine. Hydrogen chloride gas. Chlorine oxides. Hypochlorous acid. Sodium chlorate.

Section 11: Toxicological information

11.1 Information on hazard classses as defined in Regulation (EC) No. 1272/2008

Toxicological information	No toxicological information for the overall finished product.
Acute toxicity (Oral LD50)	No information available as testing has not been completed.
Acute toxicity (Dermal LD50)	No information available as testing has not been completed.
Acute toxicity (Inhalation LD50)	No information available as testing has not been completed.
Serious eye damage/irritation	Causes serious eye damage.
Skin corrosion/irritation	The product is classified as a skin corrosion/irritation hazard.
Respiratory sensitisation	The product is not classified as a respiratory hazard.
Skin sensitisation	The product is not classified as a skin sensitisation hazard.
Germ cell mutagenicity	The product is not classified as a mutagen.
Carcinogenicity	The product is not classified as a carcinogen hazard.
Specific target organ toxicity - Single exposure:	
STOT - Single exposure	The product is not classified as a single exposure specific target organ toxin.
Specific target organ toxicity - Repeated exposure:	
STOT - Repeated exposure	The product is not classified as a repeat exposure specific target organ toxin.
Inhalation	Inhalation of mist or vapor may cause respiratory tract irritation.
Ingestion	May cause chemical burns in mouth and throat. May cause severe internal injury.
Skin contact	Corrosive. Causes severe skin burns.
Eye contact	Extreme irritation of eyes and mucous membranes, including burning and tearing. Corrosive to eyes.
Waste management	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
Routes of entry	Eyes, skin, ingestion or inhalation.
Target organs	Eyes, skin, digestive system, respiratory system.
Aspiration hazards:	The product is not classified as an aspiration hazard.

Reproductive toxicity: The product is not classified as a reproductive hazard.

Name	LD50 oral	LD50 dermal	LD50 inhalation
sodium hypochlorite	5800.00mg/kg Mouse		

11.2 Information on other hazards

Information on other hazards None known.

Section 12: Ecological information

12.1 Toxicity

Acute toxicity - Fish No information available as testing has not been completed.
Acute toxicity - Aquatic invertebrates No information available as testing has not been completed.
Acute toxicity - Aquatic plants No information available as testing has not been completed.
Acute toxicity - Microorganisms No information available as testing has not been completed.
Chronic toxicity - Fish No information available as testing has not been completed.
Chronic toxicity - Aquatic invertebrates No information available as testing has not been completed.
Chronic toxicity - Aquatic plants No information available as testing has not been completed.
Chronic toxicity - Microorganisms No information available as testing has not been completed.
Ecotoxicity The 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.
Eco toxilogical information No ecological toxicity available on the overall finished product.

12.2 Persistence and degradability

Degradability The degradability of the product has not been stated.
Biological oxygen demand No information available as testing has not been completed.
Chemical oxygen demand No information available as testing has not been completed.

12.3 Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.
Bioaccumulation factor No information available as testing has not been completed.
Partition coefficient; n-Octanol/Water Not applicable as the product is a mixture.

12.4 Mobility in soil

Mobility Soluble in water.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment The product does not contain any PBT or vPvB Substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties The product does not contain any substances with endocrine disrupting properties at a concentration above or equal to 0.1%.

12.7 Other adverse effects

Other adverse effects None known.

Name	Acute toxicity (Fish)	Acute toxicity (Aquatic invertebrates)	Acute toxicity (Aquatic plants)
Sodium hydroxide	LC50 96 Hours 125.00mg/l Freshwater Fish		

Section 13: Disposal considerations

Waste management When handling waste, consideration should be made to the safety precautions applying to handling of the product.

13.1 Waste treatment methods

Disposal methods Dispose of waste and residues in accordance with local authority requirements.

Section 14: Transport information

14.1 UN number or ID number

UN no. (ADR)	UN3266
UN no. (IMDG)	UN3266
UN no. (IATA)	UN3266

14.2 UN proper shipping name

ADR proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (sodium hydroxide + sodium hypochlorite)
IMDG proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (sodium hydroxide + sodium hypochlorite)
IATA proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC N.O.S. (sodium hydroxide + sodium hypochlorite)

14.3 Transport hazard class(es)

ADR class	8
IMDG class	8
IATA class	8

Transport labels

14.4 Packing group

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

14.5 Environmental hazards

ADR	No
IMDG	No
IATA	No

14.6 Special precautions for user

EMS	F-A, S-B
Emergency action code	A3 A803
Hazard no. (ADR)	80
Tunnel restriction code	(E)

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Section 15: Regulatory information

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

EU legislation 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Approved code of practice	Workplace Exposure Limits Guidance Note EH40/2005. 2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)

15.2 Chemical safety assessment

Chemical safety assessment	No chemical safety assessment has been carried out.

Section 16: Other information

General information	This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010.
Revision comments	This is a second issue. [1]Information updated. [2]Information updated. [3]Information updated. [5]Information updated. [7]Information updated. [8]Information updated. [9]Information updated. [11]Information updated. [12]Information updated. [15]Information updated.
Revision date	25 February 2021
Supersedes date	07 June 2017
Revision	2
Safety data sheet status	Approved.

Hazard statements in full

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
EUH031	Contact with acids liberates toxic gas.
H400	Very toxic to aquatic life.

Disclaimer

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.