



SAFETY DATA SHEET
20L SUPER PROFESSIONAL MACHINE DISHWASH C5
 Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name	20L SUPER PROFESSIONAL MACHINE DISHWASH C5
Product number	800-234-0396 C5
Container size	20L

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

Identified uses	Machine dishwashing detergent.
Uses advised against	DO NOT use for hand dishwashing.

1.3. Details of the supplier of the safety data sheet

Supplier	Mirius™ A Coventry Group Company Woodhams Road Siskin Drive Coventry CV3 4FX Tel: +44 (0) 02476 639 739 Fax: +44 (0) 02476 639 717 Email: sales@mirius.com
Contact person	For content of safety data sheet:, sds@mirius.com

1.4. Emergency telephone number

Emergency telephone	+44 (0) 1865407333 (Strictly for emergencies only: incidents involving damage to human health and/or the environment)
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National emergency telephone number In case of a medical emergency following exposure to a chemical call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards	Not Classified

2.2. Label elements

Pictogram



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Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage.
Precautionary statements	P260 Do not breathe vapour/ spray. P264 Wash contaminated skin thoroughly after handling. 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. P337+P313 If eye irritation persists: Get medical advice/ attention. P501 Dispose of contents/ container in accordance with local regulations.
Contains	SODIUM HYDROXIDE, TETRASODIUM ETHYLENE DIAMINE TETRAACETATE
Detergent labelling	< 5% EDTA and salts thereof
Supplementary precautionary statements	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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-XXXX
Classification	Classification (67/548/EEC or 1999/45/EC)
Met. Corr. 1 - H290	C;R35
Skin Corr. 1A - H314	
Eye Dam. 1 - H318	
TETRASODIUM ETHYLENE DIAMINE TETRAACETATE	1-5%
CAS number: 64-02-8	EC number: 200-573-9
	REACH registration number: 01-2119486762-27-XXXX
Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	Xn;R22 Xi;R41
Acute Tox. 4 - H332	
Eye Dam. 1 - H318	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention immediately. Provide eyewash station and safety shower.
Inhalation	Remove affected person from source of contamination. Keep affected person warm and at rest. Get medical attention immediately. For breathing difficulties, oxygen may be necessary.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

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Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Chemical burns must be treated by a physician. Get medical attention immediately.
Inhalation	Severe irritation of nose and throat. May cause an asthma-like shortness of breath.
Ingestion	This product is corrosive. Small amounts may cause serious damage. May cause chemical burns in mouth, oesophagus and stomach.
Skin contact	May cause serious chemical burns to the skin.
Eye contact	This product is corrosive. A single exposure may cause the following adverse effects: Severe irritation, burning, tearing and blurred vision. Prolonged contact causes serious eye and tissue damage. Corneal damage.

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

Notes for the doctor	Treat symptomatically. Remove contaminated clothing immediately and wash skin with soap and water.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Foam, carbon dioxide or dry powder.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Avoid contact with the following materials: Aluminium. Zinc. Avoid contact with water. May generate heat.
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5.3. Advice for firefighters

Protective actions during firefighting	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.
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6.2. Environmental precautions

Environmental precautions	Avoid or minimise the creation of any environmental contamination. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

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Methods for cleaning up Do not touch or walk into spilled material. Stop leak if safe to do so. Small Spillages: Flush away spillage with plenty of water. Large Spillages: Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely.

6.4. Reference to other sections

Reference to other sections For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 1 for emergency contact information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Avoid the formation of mists. Provide adequate ventilation. Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Never add water directly to this product as it may cause a vigorous reaction or boiling. Always dilute by carefully pouring the product into water.

Advice on general occupational hygiene Good personal hygiene procedures should be implemented. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Eye wash facilities and emergency shower must be available when handling this product. Wash promptly with soap and water if skin becomes contaminated. Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a well-ventilated place. Store away from the following materials: Acids. Oxidising materials.

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.

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 HYDROXIDE (CAS: 1310-73-2)

DNEL Industry - Inhalation; Long term local effects: 1.0 mg/m³
Consumer - Inhalation; Long term local effects: 1.0 mg/m³

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)

DNEL General population - Oral; Long term systemic effects: 25 mg/kg/day
General population - Inhalation; Long term local effects: 0.6 mg/m³
General population - Inhalation; Short term local effects: 1.2 mg/m³
Workers - Inhalation; Long term local effects: 1.5 mg/m³
Workers - Inhalation; Short term local effects: 3 mg/m³

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PNEC

- Fresh water; 2.2 mg/l
- Marine water; 0.22 mg/l
- Intermittent release; 1.2 mg/l
- STP; 43 mg/l
- Soil; 0.72 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

Wear protective gloves. Neoprene. Nitrile rubber. Polyethylene. Polyvinyl chloride (PVC).

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Provide eyewash station and safety shower. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated.

Respiratory protection

No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Particulate filter, type P2. Particulate filters should comply with European Standard EN143.

Environmental exposure controls

Avoid releasing into the environment. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	No characteristic odour.
pH	pH (concentrated solution): >13.5
Relative density	1.185 typically @ @ 20°C
Solubility(ies)	Soluble in water.
Explosive under the influence of a flame	Not considered to be explosive.
Comments	Information given is applicable to the product as supplied.

9.2. Other information

Other information	Not relevant.
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SECTION 10: Stability and reactivity

10.1. Reactivity

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Reactivity Reactions with the following materials may generate heat: Water. Strong acids. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Avoid contact with the following materials: Aluminium. Zinc. Tin.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react violently with the product: Chlorohydrocarbons. Acids. Reactions with the following materials may generate heat: Water.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Materials to avoid Acids. Ammonia. Chlorinated hydrocarbons. Aluminium. Tin. Zinc.

10.6. Hazardous decomposition products

Hazardous decomposition products Hydrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Information given is based on data of the components and of similar products.

Other health effects There is no evidence that the product can cause cancer.

Acute toxicity - oral

Notes (oral LD₅₀) Estimated value. No specific test data are available. Based on available data the classification criteria are not met.

ATE oral (mg/kg) 63,571.43

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns. Calculation method.

Serious eye damage/irritation

Serious eye damage/irritation Corrosivity to eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation Not sensitising. Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

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Reproductive toxicity

Reproductive toxicity - fertility Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

General information

Corrosive to skin and eyes.

Inhalation

Spray/mists may cause respiratory tract irritation. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Ingestion

May cause burns in mucous membranes, throat, oesophagus and stomach.

Skin contact

May cause serious chemical burns to the skin. Repeated exposure may cause skin dryness or cracking.

Eye contact

Causes burns. A single exposure may cause the following adverse effects: Corneal damage. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.

Toxicological information on ingredients.

SODIUM HYDROXIDE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,000.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.1

Species Rabbit

Skin corrosion/irritation

Skin corrosion/irritation Burning pain and severe corrosive skin damage.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Skin sensitisation

Skin sensitisation Not sensitising.

SECTION 12: Ecological Information

Ecotoxicity

There are no data on the ecotoxicity of this product.

Ecological information on ingredients.

SODIUM HYDROXIDE

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Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

Acute aquatic toxicity

Acute toxicity - aquatic plants May cause long lasting harmful effects to aquatic life.

Acute toxicity - terrestrial Can cause damage to vegetation.

Ecological information on ingredients.

SODIUM HYDROXIDE

Acute aquatic toxicity

Acute toxicity - fish REACH dossier information.
LC₅₀, 96 hours: < 180 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 40.4 mg/l, Freshwater invertebrates

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not available.

Chronic toxicity - aquatic invertebrates Not available.

12.2. Persistence and degradability

Persistence and degradability Degrades very slowly in nature.

Ecological information on ingredients.

SODIUM HYDROXIDE

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

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

Ecological information on ingredients.

SODIUM HYDROXIDE

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems.

Ecological information on ingredients.

SODIUM HYDROXIDE

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

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

Ecological information on ingredients.

SODIUM HYDROXIDE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Ecological information on ingredients.

SODIUM HYDROXIDE

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. The packaging must be empty (drop-free when inverted). Wash with plenty of water. Dispose of waste via a licensed waste disposal contractor.

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
IMDG class	8
ICAO class/division	8
ADN class	8

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Transport labels



14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-A, S-B
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	<p>The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).</p> <p>Control of Pollution (Special Waste) Regulations 1980 (as amended).</p> <p>The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].</p> <p>EH40/2005 Workplace exposure limits.</p> <p>The Hazardous Waste Regulations 2005.</p>
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EU legislation	<p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).</p> <p>Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work (as amended).</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).</p> <p>Commission Regulation (EU) No 453/2010 of 20 May 2010.</p> <p>Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.</p> <p>Commission Regulation (EU) No 2015/830 of 28 May 2015.</p>
Guidance	<p>COSHH Essentials.</p> <p>Technical Guidance WM2: Hazardous Waste.</p> <p>ECHA Guidance on the Application of the CLP Criteria.</p> <p>ECHA Guidance on the compilation of safety data sheets.</p> <p>Workplace Exposure Limits EH40.</p>

15.2. Chemical safety assessment

A Chemical Safety Assessment (CSA) has been completed for Sodium hydroxide. Currently we do not have information from our suppliers about this.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	<p>EWC European Waste Catalogue</p> <p>STOT RE = Specific target organ toxicity-repeated exposure</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p> <p>PNEC: Predicted No Effect Concentration.</p> <p>DNEL: Derived No Effect Level.</p>
General information	<p>Only trained personnel should use this material.</p>
Revision comments	<p>New revision number applied to comply with 'Commission Regulation (EU) No 2015/830 Of 28 May 2015' NOTE: Lines within the margin indicate significant changes from the previous revision.</p>
Revision date	06/07/2018
Revision	2
Supersedes date	08/06/2017
SDS number	21542
Risk phrases in full	<p>R22 Harmful if swallowed.</p> <p>R35 Causes severe burns.</p> <p>R41 Risk of serious damage to eyes.</p>
Hazard statements in full	<p>H290 May be corrosive to metals.</p> <p>H302 Harmful if swallowed.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p>