SAFETY DATA SHEET

Product Name **LOTUS AUTOMATIC DISH & GLASS WASHER DETERGENT**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	**Dowco Associates**
Address	62 Riverbank Road, Otaki
Telephone	+64 6 364 5767
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Emergency	0800 243 622

Synonym(s) 5LT & 20LT

Use(s) COMMERCIAL AUTOMATIC DISHWASHER & GLASS MACHINE DETERGENT

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES [CLASSIFICATION] REGULATIONS 2001

GHS CLASSIFICATION

Skin Corrosion/Irritation	Category 1B
Eye Corrosion/Irritation	Category 1
Corrosive to Metals	Category 1
Hazardous to Terrestrial Vertebrates	

Signal Word: **DANGER**

Hazard Codes

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H433	Harmful to terrestrial vertebrates.

Prevention Codes

P102	Keep out of reach of children.
P103	Read label before use.
P234	Keep only in original container.
P260	Do not breathe mist/spray.
P264	Wash hands and face thoroughly with soap and water after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/clothing and eye/face protection.

Response Codes

P101	If medical advice is needed, have product container or label at hand.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
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.
P321	Specific treatment (see supplemental first aid information on the label).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.

Storage Codes

P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.

Disposal Codes

P501	Disposal of content/container should be made in accordance with all applicable local, regional, and national laws and regulations.

3. COMPOSITION INFORMATION

Ingredient	CAS Number	Content
Sodium Hydroxide	1310-73-2	10 – 30%
Tetrasodium EDTA Tetrahydrate	13235-36-4	< 10%
Nitrilotrimethylenetris(phosphonic acid)	6419-19-8	< 5%
Ingredients determined to be non-hazardous	-	Balance

4. FIRST AID MEASURES

Eye Rinse with copious amounts of water for at least 15 minutes including under eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical assistance immediately.

Skin If skin or hair contact occurs, remove contaminated clothing and flood skin and hair with running water for at least 15 minutes. Seek medical assistance.

Ingestion DO NOT INDUCE VOMITING. Do not give anything to drink. Seek medical assistance immediately.

Inhalation Remove patient to fresh air. If breathing becomes difficult get medical attention. Apply artificial respiration if not breathing.

Advice to Doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazard Type Non-flammable

Extinguishing Media Dry chemical powder, foam, fog sprays and water jets.

Fire/Explosion Hazard Thermal decomposition may produce toxic gases. Exhibits violent reactions with oxidising materials.

Precautions for firefighters Self-contained breathing apparatus. Safety boots, Chemical resistant overalls, gloves, helmet, and eye protection.

6. ACCIDENTAL RELEASE MEASURES

Minor Spills Wear protective equipment to prevent skin, eye, and respiratory exposure. Contain using sand, earth, or vermiculite.

Major Spills Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Use absorbent (soil, sand, or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazards.
Collect and seal absorbent in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Mop up and collect recoverable material into labelled into labelled containers for recycling or salvage.
Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose in accordance with all regulations.

7. HANDLING AND STORAGE

Handling Keep out of reach of children. Avoid contact with skin, eyes, and inhalation of fumes. Use personal protective equipment as required. Eating, drinking, and smoking in work areas is prohibited.

Storage Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs and incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Substance	CAS Number	TWA (Ceiling)
Sodium Hydroxide	1310-73-2	2 mg/m^3

Engineering Controls General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances.

Personal Protective Equipment

Eyes Protect eyes with goggles, safety glasses or full-face mask. Avoid wearing contact lenses.

Skin Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking, or using the toilet.

Respiratory Use a P3 level respirator that complies with AS/NZS 1715 when operating in enclosed space or where there is a risk of vapour generation during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	**Upper explosive limit**	Not determined
Appearance	Colourless	**Lower explosive limit**	Not determined
Odour	Not detectable	**Vapour pressure**	Not determined
Odour threshold	Not determined	**Vapour density**	Not determined
Relative density	1.0 g/mL (approx.)	**Solubility in water**	Soluble
pH as supplied	11.0 – 12.0	**Partition coefficient n-octanol/water**	Not determined
Freezing point	Not determined	**Autoignition temperature**	Not determined
Boiling point	100°C (approx.)	**Decomposition temperature**	Not determined
Flash point	Not determined	**Kinematic Viscosity**	Not determined
Flammability	Not determined		

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal storage conditions.

Incompatible Materials Strong oxidising agents. Contact with metals such as aluminium, magnesium, tin and zinc can cause formation of flammable hydrogen gas.

Hazardous Decomposition Products Carbon oxides (CO, CO_2), Nitrogen oxides (NO, N_2O, NO_2)

Hazardous Polymerisation Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Summary No specific data is available for this product.
Toxicological data has been evaluated/calculated for the mixture. The product is considered to have the following potential health effects.
Contact with eyes or skin may result in serious damage/injury.

Supporting Data

Acute	**Oral**	Ingestion is not thought to produce harmful toxic effects. The mixture presents a significant risk of burns to the oesophagus and upper respiratory tract due to the pH of the formulation.
	Dermal	Skin contact is not thought to have harmful toxic effects.
	Inhaled	The mixture is not though to be toxic through inhalation. The mixture presents a risk of irritation to the upper respiratory tract.
	Eye	The mixture is considered an eye corrosive based on the summation method.
	Skin	The mixture is considered a skin corrosive based on the summation method.

Chronic	**Sensitisation**	No data
	Mutagenicity	No data
	Carcinogenicity	No data
	Reproductive/development	No data
	Systemic	No data
	Aggravation of existing conditions	None known

12. ECOLOGICAL INFORMATION

Summary	No specific data is available for this product.
Aquatic	No data
Bioaccumulation	No data
Degradability	No data
Soil	No data
Terrestrial vertebrate	The mixture is considered to be ecotoxic to terrestrial vertebrates based on the summation method.
Terrestrial invertebrate	No data

13. DISPOSAL CONSIDERATIONS

Rinse containers well with water before disposal. Preferably rec-cycle container, otherwise send to an authorized landfill or similar in accordance with all relevant, local, regional, and national regulations.

14. TRANSPORT INFORMATION

Road & Rail Transport	Classified as dangerous goods by the criteria of NZS5433:2012 – Transport of Dangerous Goods on Land.
Sea Transport	Classified as dangerous good under the IMDG transport regulations.
Air Transport	Classified as dangerous goods under the IATA/ICAO transport regulations.

UN No	1824
Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
DG Class	8
Packing Group	II
Hazchem Code	2R

15. REGULATORY INFORMATION

NZ EPA Approval Code	HSR002526 – Cleaning Products (Corrosive) Group Standard 2020
NZIoC	All components are listed on the New Zealand Inventory of Chemicals.

Trigger quantities for this substance

	Trigger Quantity
Certified Handler	Not required.
Location Certificate	250L
Tracking Trigger Quantities	Not required.
Signage Trigger Quantities	250L
Emergency Response Plan Trigger Quantities	1,000L

16. OTHER INFORMATION

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SDS Regulation The content and format of this SDS is in accordance with HSNO COP 8-1 09-0-6: HSNO Approved Code of Practice – Preparation of Safety Data Sheets.

Disclaimer This document is compiled based on current knowledge as provided by the suppliers or information obtained from third party sources relating to the hazard classification, safety, and handling precautions for this product. Dowco Associates Ltd has taken all due care to include accurate and up-to-date information in this document and does not provide any warranty as to accuracy or completeness. The information herein is given in good faith but no warranty, express or implied is made.

Abbreviations:

AS/NZS	Joint Australian-New Zealand standard
CAS	Chemical Abstracts Service (Registry Number)
EPA	Environmental Protection Authority
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Regulations
NZIoC	New Zealand Inventory of Chemicals
NZS	New Zealand Standard
TWA	Time Weighted Average