SAFETY DATA SHEET

Herd Navigator Detergent

Preparation Date: 13-Jan-2017
Revision Number: *2.2*
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Date of Next Revision: *24-Mar-2031*

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name	Herd Navigator Detergent
Item#:	NZ0007
Recommended use	Cleansing agents, alkaline
Uses advised against	Restricted to professional users
Supplier	DeLaval Ltd, 82 Greenwood street, Hamilton New Zealand
Telephone Number	(07) 849-6020 (8am - 4:30pm Mon-Fri)
Emergency Telephone Number	0800 764 766 (National Poison Centre) 0800 243 622 CHEMCALL

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture according to GHS

Acute toxicity - Oral - Category 4
Skin corrosion/irritation - Category 1B
Serious eye damage/eye irritation - Category 1
Corrosive to Metals - Category 1

2.2. Label Elements

Hazard Pictogram(s)

Signal word	DANGER
Hazard Statements	H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H290 - May be corrosive to metals
Precautionary statements	P102 - Keep out of reach of children P280 - Wear protective gloves/protective clothing/eye protection/face protection P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel

unwell
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
P501 - Dispose of contents/container in accordance with local regulations

Contains potassium hydroxide, Sodium hydroxide, Tetrasodium EDTA

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Potassium hydroxide	1310-58-3	10 - 30%
Sodium Hydroxide	1310-73-2	10 - 30%
Tetrasodium EDTA	64-02-8	1 - 10%
Nitrilotriacetic acid trisodium salt	5064-31-3	0 - 1%

4. FIRST AID MEASURES

Workplace Facilities Eyewash bottle with clean water

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye contact Immediate medical attention is required
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Keep eye wide open while rinsing

Skin contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation Move to fresh air
If not breathing, give artificial respiration
If breathing is difficult, give oxygen
Call a physician or Poison Control Center immediately

Ingestion Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Notes to Physician Treat symptomatically.

Protection of First-aiders Use personal protective equipment. Avoid contact with skin, eyes and clothing.

5. FIRE-FIGHTING MEASURES

Hazchem Code No Hazchem Code allocated

Flammable Properties No information available.

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. alcohol-resistant foam.

Unsuitable Extinguishing Media No information available.

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapours. In the event of fire and/or explosion do not breathe fumes.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for cleaning up Dam up. Take up mechanically and collect in suitable container for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Keep away from direct sunlight. Keep away from metals. Corrosive to metals.

Type of Container/Package Store in original container

Handle and store according to AS/NZS Standards and the Responsible Care Management Systems: Managers Handbook.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical name	WES (New Zealand)
Potassium hydroxide	Ceiling: 2 mg/m^3
Sodium Hydroxide	Ceiling: 2 mg/m^3

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Tightly fitting safety goggles. Face-shield.

Skin Protection Long sleeved clothing, Chemical resistant apron, Boots

Hand Protection Neoprene gloves

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. In case of insufficient ventilation wear suitable respiratory equipment.

General Hygiene Considerations

Keep away from food, drink and animal feedingstuffs. When using, do not eat, drink or smoke. Contaminated work

clothing should not be allowed out of the workplace. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light yellow
Physical state	Liquid
Odor	Pungent
Odor Threshold	No information available
pH	(1 %) 12.5
Melting Point/Range	No data available
Freezing Point/Range	No data available
Boiling Point/Range	No data available
Initial boiling point/range	No data available
Flash Point	No data available
Flammability (solid, gas)	No information available
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative density	No data available
Solubility	No information available
Solubility in other solvents	No data available
Partition Coefficient (n-octanol/water)	No information available
Autoignition Temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Particle characteristics	No data available
Specific Gravity	No data available
Liquid Density	1.360 g/mL
Corrosive to metals	Corrosive to metals

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Exposure to air or moisture over prolonged periods. Burning produces obnoxious and toxic fumes. Heating can release hazardous gases. To avoid thermal decomposition, do not overheat.
Incompatible Materials	Incompatible with strong acids and bases, Incompatible with oxidizing agents
Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Inhalation No information available.
Eye contact No information available.
Skin contact No information available.
Ingestion Harmful if swallowed.

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	214 mg/kg (Rat)		
Sodium Hydroxide	-	1350 mg/kg (Rabbit)	-
Tetrasodium EDTA	1658 mg/kg (Rat)		1.5 mg/L (ATE - D/M)
Nitrilotriacetic acid trisodium salt	= 1100 mg/kg (Rat)		> 5 mg/L (Rat) 4 h

Skin corrosion/irritation Causes severe skin burns
Serious eye damage/eye irritation Causes serious eye damage
Respiratory or skin sensitization Based on available data, the classification criteria are not met
Germ cell mutagenicity Based on available data, the classification criteria are not met
Carcinogenicity There are no known carcinogenic chemicals in this product.

Chemical name	Nitrilotriacetic acid trisodium salt
IARC	Group 2B

Reproductive toxicity Based on available data, the classification criteria are not met
Developmental Effects No information available.
STOT - single exposure No information available
STOT - repeated exposure No information available.
Aspiration hazard Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Microtox	Waterflea
Sodium Hydroxide		LC 50 (96 h) 45.4 mg/l (Oncorhynchus mykiss)		EC50 (48 hour): 40.4 mg/l (Ceriodaphnia dubia) >100 mg/l (daphnia) (OECD 202)
Tetrasodium EDTA		41: 96 h Lepomis macrochirus mg/L LC50 static 59.8: 96 h Pimephales promelas mg/L LC50 static		
Nitrilotriacetic acid trisodium salt		175 - 225: 96 h Lepomis macrochirus mg/L LC50 static 560 - 1000: 96 h Oryzias latipes mg/L LC50 560 - 1000: 96 h Oryzias latipes mg/L LC50 semi-static 560 - 1000: 96 h Poecilia reticulata mg/L LC50 560 - 1000: 96 h Poecilia reticulata mg/L LC50 semi-static 72 - 133: 96 h Oncorhynchus mykiss mg/L LC50 static 93 - 170: 96 h Pimephales promelas mg/L LC50 flow-through 114: 96 h Pimephales promelas mg/L LC50 252: 96 h Lepomis macrochirus mg/L LC50 470: 96 h Pimephales promelas mg/L LC50 static	EC50 3200 - 5600 mg/L 8 h	560 - 1000: 48 h Daphnia magna mg/L LC50

Persistence and degradability No information available

Bioaccumulation/Accumulation No information available.

Mobility No information available

Other adverse effects No information available

Biodegradation Some ingredients of this material have some potential to biodegrade, but most ingredients have a limited potential to biodegrade or have not been tested.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Should not be released into the environment. It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

Proper Shipping Name	1719 - Caustic alkali liquid, n.o.s (Sodium hydroxide, Potassium hydroxide)
Transport hazard class(es)	8
Packing Group	III
Environmental hazard	No information available
Hazchem Code	No Hazchem Code allocated

15. REGULATORY INFORMATION

EPA Group Standard	Cleaning Products - (Corrosive) Group Standard 2020 HSR002526
EPA Reference	Guidance to the changes introduced by the Health and Safety at Work (Hazardous Substances) Regulations 2017

16. OTHER INFORMATION

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References	- Hazardous Substances (Hazardous Classification) Notice 2020 - Hazardous substances (Labelling) Notice 2017 - Hazardous Substances (Safety Data Sheets) Notice 2017 - European Agreement concerning the International Carriage of Dangerous Goods by Road - New Zealand Workplace Exposure Standards (WES) - International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans - Chemical Classification and Information Database (CCID)

Disclaimer

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End of SDS