

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **ReduClean Diffuse**
 Item Code:
 Product Use: Detergent to clean removable greenhouses coatings
 Restriction of Use: Refer to Section 15

New Zealand Supplier: Horticulture Ltd
 Address: 10 Firth Street
 Drury, 2113

Telephone: +64 9 294 8453
 Fax Number: +64 9 294 7272

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 24 May 2022

Section 2. Hazards Identification

This substance is hazardous as per EPA Hazardous Substances (Classification) Notice 2020.

EPA Approval No: HSR001577

Pictograms



Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Corrosive to metals Cat. 1	H290	May be corrosive to metals.
Skin corrosion Cat. 1C	H314	Causes severe skin burns and eye damage.
Serious eye damage Cat. 1	H318	Causes serious eye damage.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P234	Keep only in original container.
P260	Do not breathe fumes, vapours or spray.
P264	Wash hands thoroughly after handling.

P280	Wear protective clothing as detailed in Section 8.
------	--

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
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: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
sodium hydroxide; caustic soda	2-5	1310-73-2

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. Rinse opened eye for several minutes under running water. Then consult doctor. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
If on Skin	After contact with skin, take off immediately all contaminated clothing, and wash before reuse. Wash skin with plenty of water. Immediately call a POISON CENTER or doctor/physician.
If Swallowed	If swallowed, rinse mouth with water (only if the person is conscious). Drink plenty of water. Get medical advice/attention. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Skin:	Causes skin burns, redness and pain.
Eyes:	Causes severe eye damage. Pain. Redness. Blurred vision.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	Carbon oxides (CO, CO ₂). Sulphur dioxide. fume. Carbon monoxide. Carbon dioxide.
Suitable Extinguishing media	Water spray. Carbon dioxide (CO ₂). Foam. Extinguishing powder. Foam. Dry powder. Carbon dioxide. Water spray. Sand. Do not use high power water jet or heavy water stream.
Precautions for firefighters and special protective clothing	Self-contained breathing apparatus. Protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent firefighting water from entering the environment.
HAZCHEM CODE	2W

Section 6. Accidental Release Measures

Provide adequate ventilation. Avoid breathing fumes, vapours or spray. Avoid all contact with skin, eyes, or clothing. Wear suitable protective clothing as detailed in Section 8. Warning! Product may cause floors to be slippery. Evacuate unnecessary personnel.

Do not allow to enter sewers / surface or ground water. If the product leaks into water or sewage system, inform appropriate authorities.

Clean up any spills as soon as possible, using an absorbent material to collect it. Use suitable disposal containers. Wash away spilled liquid with plenty of water. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Dispose of in accordance with local regulations as per Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Keep only in original container.
- Do not breathe fumes, vapours or spray.
- Wear protective clothing as detailed in Section 8.
- Avoid contact with skin and eyes.
- Do not mix with other chemicals.
- Do not drink, eat or smoke in the workplace.
- Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
- Provide good ventilation in process area to prevent formation of vapour.

Precautions for Storage:

- Store locked up.
- Keep out of reach of children.
- Store in corrosive resistant container with a resistant inner liner.
- Keep container tightly closed.
- Keep in a cool place.
- Keep out of frost.
- Store in original container.
- Keep only in the original container in a cool well ventilated place.
- Keep container closed when not in use.
- Incompatible materials: Acids. Oxidizing agents. Strong bases. Strong acids.
- Keep away from sources of ignition and direct sunlight.
- Packaging materials: Polyethylene. Stainless steel. Unsuitable materials: Tin. Lead. Copper (Cu). Avoid aluminium, magnesium and zinc.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Product Name: ReduClean Diffuse
Date of SDS: 25 May 2022

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Substance**TWA**
ppm mg/m³**STEL**
ppm mg/m³

Sodium hydroxide [1310-73-2]

Ceiling 2

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Additional information : DNEL value of 110 mg/m³ is based on the content of sodium hydroxide

Engineering Controls

Ensure adequate ventilation.

Personal Protection Equipment

Eyes	Wear eye protection/face protection. Chemical goggles or safety glasses.
Hands and Skin	Wear shoes (boots) of Neoprene. Corrosion proof clothing. Wear suitable protective clothing.
Respiratory	Avoid inhalation of vapours. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Combined gas/dust mask with filter type B/P2. Wear appropriate mask.
General	Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and at the end of work. Avoid all unnecessary exposure. Do not get in eyes, on skin, or on clothing. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke during use. Have eyewash showers available.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Colourless to slightly yellow
Odour	Characteristic
Odour Threshold	Not available
pH	13.5
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Product is not flammable.
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Density	1.1 g/cm ³
Solubilities	Completely soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Dynamic Viscosity	1600 mPa·s Brookfield LV, spindle 3, 5 rpm, 20°C

Product Name: ReduClean Diffuse
Date of SDS: 25 May 2022

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Particle Size	Not available
----------------------	---------------

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Reacts with	Ammonium salts, most metals in presence of moisture, liberating hydrogen and extremely flammable gas.
Conditions to Avoid	Avoid high temperature, direct sunlight and extremely high and low temperatures.
Incompatible Materials	Oxidising agents, strong acids and bases.
Hazardous Decomposition Products	Carbon oxides (CO, CO ₂). Sulphur dioxide. fume. Carbon monoxide. Carbon dioxide.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes severe eye damage. pH = 13.5
Skin	Causes skin burns. pH = 13.5

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Persistence and degradability	Product is biodegradable.
Bioaccumulation	No indication of bio-accumulation potential.
Mobility in Soil	No data available.
Other adverse effects	No data available.

Section 13. Disposal Considerations

Disposal Method: Dispose in a safe manner according to Local Regulations. Contaminated packing must be completely emptied and can be re-used following appropriate cleaning. This container is intended only for this product. Containers, or internal liners coming from a container, having contained this product are also considered as hazardous wastes. Empty containers can be dumped according to local legislation.

Precautions and methods to avoid: Avoid release to the environment.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012



Road, Rail, Sea and Air Transport

UN No	1824
Class - Primary	8
Packing Group	III
Proper Shipping Name	SODIUM HYROXIDE SOLUTION
Marine Pollutant	No
Special Provisions	If the product's individual container is below 5L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

EPA Approval Code: HSR001577

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000L
Emergency Response Plan	10 000L
Secondary Containment	10 000L
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state

Product Name: ReduClean Diffuse
Date of SDS: 25 May 2022

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact the New Zealand distributor, if further information is required.

Issue Date: 25 May 2022 Review Date: 25 May 2027