

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

1.1. Product identifier

Name : ReduClean
Product form : Mixture

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Detergent to clean removable greenhouses coatings.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Mardenkro North America Ltd.
47341 Hope River Road
BC V2P 6H5 Chilliwack - Canada
T +1 604 703 1103 - F +1 604 703 1104
Peter@mardenkro.com - www.mardenkro.com

1.4. Emergency telephone number

| Country | Organisation/Company | Address | Emergency number |
|---------------|----------------------|---------|------------------|
| North America | CANUTEC | | 613-996-6666 |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Met. Corr. 1 H290
Skin Corr. 1B H314

Full text of H-phrases: see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger
Hazardous ingredients : sodium hydroxide, caustic soda
Hazard statements (CLP) : H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
Precautionary statements (CLP) : P234 - Keep only in original container
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P264 - Wash ... thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH)

3.2. Mixture

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--------------------------------|---|-------|---|
| Sodium dodecylbenzenesulfonate | (CAS No) 25155-30-0 (EC no) 246-680-4 | 1-2.5 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 |
| sodium hydroxide, caustic soda | (CAS No) 1310-73-2 (EC no) 215-185-5 (EC index no) 011-002-00-6 | 0.5-2 | Skin Corr. 1A, H314 |
| Sodium p-cumenesulphonate | (CAS No) 15763-76-5 (EC no) 239-854-6 | 1-2.5 | Eye Irrit. 2, H319 |

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow breathing of fresh air. Allow the victim to rest.
- First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : 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. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : 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. Obtain emergency medical attention.

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

- Symptoms/injuries after skin contact : Skin irritation. Symptoms/injuries after skin contact. Redness, pain. Causes skin irritation.
- Symptoms/injuries after eye contact : May cause eye irritation. Symptoms/injuries after eye contact. Pain. Redness. Blurred vision. Causes serious eye irritation.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Carbon dioxide (CO₂). Foam. Extinguishing powder. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : High power water jet. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Self-contained breathing apparatus. Protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Provide adequate ventilation. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid all contact with skin, eyes, or clothing. Wear suitable protective clothing. Warning! Product may cause floors to be slippery.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Do not allow uncontrolled leakage of product into the environment. Dilute with a large quantity of water. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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according to Regulation (EC) No. 1907/2006 (REACH)

6.3. Methods and material for containment and cleaning up

- For containment : Clean up any spills as soon as possible, using an absorbent material to collect it. Use suitable disposal containers.
- Methods for cleaning up : 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.

6.4. Reference to other sections

Reference to other sections (8, 13). See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : 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.
- Hygiene measures : Wash Hands and forearms, Skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : 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 products : Acids. Oxidizing agents. Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Packaging materials : Suitable material: Polyethylene. Stainless steel. Unsuitable materials: Tin. Lead. Copper (Cu). Avoid aluminium, magnesium and zinc.

7.3. Specific end use(s)

No specific measures are necessary.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

8.2. Exposure controls

Personal protective equipment : Combined gas/dust mask with filter type B/P2. Corrosionproof clothing. Gloves. Protective goggles. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and at the end of work. Avoid all unnecessary exposure.



- Hand protection : Nitrile: penetration time > 480', thickness > 0.35 mm. Chemical resistant PVC gloves (to European standard EN 374 or equivalent). PVC: penetration time > 480', thickness > 0.35 mm; Butylrubber: penetration time > 480', thickness > 0.5 mm; Natural rubber: penetration time > 480', thickness > 0.5 mm. Wear protective gloves.
- Eye protection : Wear eye protection/face protection. Chemical goggles or safety glasses.
- Skin and body protection : Wear shoes (boots) of Neoprene. Corrosionproof clothing. Wear suitable protective clothing.
- Respiratory protection : 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.
- Other information : 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Colour : colourless to slightly yellow.
- Odour : characteristic.
- Odour threshold : No data available
- pH : 13
- Relative evaporation rate (butylacetate=1) : No data available

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| | |
|----------------------------------|--|
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : not determined |
| Flammability (solid, gas) | : Non flammable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1,1 g/cm ³ |
| Solubility | : completely soluble. |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : 1600 mPa.s Brookfield LV, spindle 3, 5 rpm, 20°C |
| Explosive properties | : None. |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

Other properties : None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with : Acids. ammonium salts. halogenated hydrocarbons. nitrogen compounds.

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

ammonium salts. Reacts with most metals in the presence of moisture, liberating hydrogen, an extremely flammable gas. Not established.

10.4. Conditions to avoid

Avoid high temperatures. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Oxidizing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Sulphur dioxide. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| Sodium dodecylbenzenesulfonate (25155-30-0) | |
|--|----------------------|
| LD50 oral rat | 438 mg/kg |
| ATE oral | 438 mg/kg bodyweight |

| Sodium p-cumenesulphonate (15763-76-5) | |
|---|--------------|
| LD50 oral rat | > 7200 mg/kg |

| | |
|-----------------------------------|--|
| Skin corrosion/irritation | : Causes severe skin burns and eye damage. pH: 13 |
| Serious eye damage/irritation | : Serious eye damage, category 1, implicit pH: 13 |
| Respiratory or skin sensitisation | : Not classified Based on available data, the classification criteria are not met |
| Germ cell mutagenicity | : Not classified Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified Based on available data, the classification criteria are not met |
| Reproductive toxicity | : Not classified Based on available data, the classification criteria are not met |

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| | |
|---|--|
| Specific target organ toxicity (single exposure) | : Not classified Based on available data, the classification criteria are not met |
| Specific target organ toxicity (repeated exposure) | : Not classified Based on available data, the classification criteria are not met |
| Aspiration hazard | : Not classified Based on available data, the classification criteria are not met |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

12.1. Toxicity

| Sodium dodecylbenzenesulfonate (25155-30-0) | |
|--|-------------------------------|
| LOEC (acute) | 5,6 mg/l Oncorhynchus kisutch |
| NOEC (acute) | 3,1 mg/l Oncorhynchus kisutch |

| Sodium p-cumenesulphonate (15763-76-5) | |
|---|----------|
| EC50 Daphnia 1 | 100 mg/l |

12.2. Persistence and degradability

| ReduClean | |
|-------------------------------|--|
| Persistence and degradability | Product is biodegradable. Not established. |

12.3. Bioaccumulative potential

| ReduClean | |
|---------------------------|---|
| Bioaccumulative potential | No indication of bio-accumulation potential. Not established. |

| Sodium dodecylbenzenesulfonate (25155-30-0) | |
|--|--------------------------------|
| BCF fish 1 | 0,064 mg/l Lepomis Macrochirus |
| Bioconcentration factor (BCF REACH) | 220 |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--------------------------------|--|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| Additional information | : 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. |
| Ecology - waste materials | : Avoid release to the environment. |

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

| | |
|---------------|--------|
| UN-No. (ADR) | : 1824 |
| UN-No. (IATA) | : 1824 |
| UN-No. (IMDG) | : 1824 |
| UN-No. (ADN) | : 1824 |

14.2. UN proper shipping name

| | |
|--------------------------------------|--|
| Proper Shipping Name (ADR) | : SODIUM HYDROXIDE SOLUTION |
| Transport document description (ADR) | : UN 1824 SODIUM HYDROXIDE SOLUTION, 8, III, (E) |

14.3. Transport hazard class(es)

| | |
|---------------------------|------|
| Class (ADR) | : 8 |
| Classification code (ADR) | : C5 |
| Class (IATA) | : 8 |
| Class (IMDG) | : 8 |

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Class (ADN) : 8
Danger labels (ADR) : 8



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 80
Classification code (ADR) : C5
Orange plates :



Transport category (ADR) : 3
Tunnel restriction code (ADR) : E
Limited quantities (ADR) : 5I
LQ : LQ07
Excepted quantities (ADR) : E1

14.6.2. Transport by sea

MFAG-No : 154

14.6.3. Air transport

No additional information available

14.6.4. Inland waterway transport

Carriage prohibited (ADN) : No

14.7. 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

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

Seveso Information :

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

Chemical safety assessments for substances in this preparation were not carried out
No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Revision : *

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

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according to Regulation (EC) No. 1907/2006 (REACH)

| | |
|-------------------|---|
| Data sources | : 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. |
| Training advice | : Normal use of this product shall imply use in accordance with the instructions on the packaging and in line with the expectations of a professional user. |
| Other information | : REACH Disclaimer: This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number). DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. None. |

Full text of R-, H- and EUH-statements:

| | |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Met. Corr. 1 | Corrosive to metals, Category 1 |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H290 | May be corrosive to metals |
| H302 | Harmful if swallowed |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

SDS_EU_Mardenkro (REACH bijlagell)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product