

MATERIAL SAFETY DATA SHEET

Osborne's Barnacle Dissolver

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Osborne's Barnacle Dissolver
Product Number: 14-023
Product Use: Marine Running Gear Barnacle Remover
Manufacturer/Supplier: Osborne Propellers Ltd.
1863 Spicer Road
North Vancouver, BC
V7H 2V2
Phone Number: 1-604-929-8407
Emergency Phone: CANUTEC 1-613-966-6666
Date of Preparation: February 16, 2015

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

CORROSIVE TO METALS. CORROSIVE TO EYES. IRRITATING TO SKIN.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: Causes burns.

Skin: Irritating to skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation.

Chronic Effects: Non-controlled, repeated or prolonged exposure may cause the possibility of target organ damage.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient | CAS # | Wt. % |
|--|------------|---------|
| Urea hydrochloride | 506-89-8 | 15 - 40 |
| Amines, C14-18 and C16-18-unsatd. alkyl, ethoxylated | 68155-39-5 | 10 - 30 |
| Alcohols, C7-21, ethoxylated | 68991-48-0 | 10 - 30 |

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

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Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention if you feel unwell.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS criteria.

Means of Extinction:

Suitable Extinguishing Media: Treat for surrounding material.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon, nitrogen, chlorine, hydrofluoric acid.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Scoop up material and place in a disposal container. Provide ventilation.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:

Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

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Storage:

Keep out of the reach of children. Keep container tightly closed. Do not store at temperatures above 49 °C / 120 °F. Do not use metal containers, especially aluminum. Store in polyethylene, or polypropylene containers.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

| Ingredient | Exposure Limits ACGIH-TLV |
|--|------------------------------|
| Urea hydrochloride | Not available. |
| Amines, C14-18 and C16-18-unsatd. alkyl, ethoxylated | Not available. |
| Alcohols, C7-21, ethoxylated | Not available. |

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------------|---------------------|
| Appearance: | Not available. |
| Colour: | Light yellow. |
| Odour: | Very mild. |
| Odour Threshold: | Not available. |
| Physical State: | Liquid. |
| pH: | 0.6 |
| Viscosity: | Not available. |
| Freezing Point: | Not available. |
| Boiling Point: | ~ 100 °C (~ 212 °F) |
| Flash Point: | Not available. |
| Evaporation Rate: | Not available. |
| Lower Flammability Limit: | Not available. |
| Upper Flammability Limit: | Not available. |
| Vapor Pressure: | Not available. |
| Vapor Density: | Not available. |
| Specific Gravity: | Not available. |
| Solubility in Water: | Complete. |

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Coefficient of Water/Oil Distribution: Not available.
Auto-ignition Temperature: Not available.
Percent Volatile, wt. %: Not available.
VOC content, wt. %: Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Heating above 110°C (230 °F) results in an exothermic decomposition which releases carbon dioxide gas.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Metals. Oxidizers. Bases. Chlorates. Nitrates.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon, nitrogen, chlorine, hydrofluoric acid.

Possibility of Hazardous Reactions: May be corrosive to metals. This product is not intended for bare aluminum.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

| Ingredient | LD ₅₀ (oral) | LC ₅₀ |
|--|-------------------------|------------------|
| Urea hydrochloride | 1121 mg/kg, rat | Not available. |
| Amines, C14-18 and C16-18-unsatd. alkyl, ethoxylated | Not available. | Not available. |
| Alcohols, C7-21, ethoxylated | > 2000 mg/kg, rat | Not available. |

Eye: Irritating to eyes. May cause burns. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Skin: Irritating to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS criteria.

Carcinogenicity: Not hazardous by WHMIS criteria.

Ingredient

Chemical Listed as Carcinogen or Potential Carcinogen *

| | |
|--|-------------|
| Urea hydrochloride | Not listed. |
| Amines, C14-18 and C16-18-unsatd. alkyl, ethoxylated | Not listed. |
| Alcohols, C7-21, ethoxylated | Not listed. |

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS criteria.

Reproductive Effects: Not hazardous by WHMIS criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS criteria.

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Embryotoxicity: Not hazardous by WHMIS criteria.

Respiratory Sensitization: Not hazardous by WHMIS criteria.

Skin Sensitization: Not hazardous by WHMIS criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

TDG Classification

UN3265; Corrosive liquid, acidic, organic, N.O.S. (Urea, monohydrochloride); Class 8; PG III Limited Quantity ($\leq 5L$)

Section 15: REGULATORY INFORMATION

Federal Regulations

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Global Inventories

Ingredient

Urea hydrochloride
Amines, C14-18 and C16-18-unsatd. alkyl, ethoxylated
Alcohols, C7-21, ethoxylated

Canada DSL/NDSL

DSL
DSL
DSL

HMIS - Hazardous Materials Identification System

Health - 3 Flammability - 0 Physical Hazard - 0 PPE - B

NFPA - National Fire Protection Association:

Health - 3 Fire - 0 Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class D2B - Skin Irritant
Class E - Corrosive Material (to eyes and metal)

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WHMIS Hazard Symbols:



SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

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