



MATERIAL SAFETY DATA SHEET

Conforms to EU Directive 91/155

1 IDENTIFICATION OF SUBSTANCE



PRODUCT DETAILS

TRADE NAME: EnviroSURF-226
PRODUCT CODE: EnviroSURF-226

Manufacturer/Supplier:

EnroChem Trading DMCC
Jewellery & Gemplex Building
DMCC, Dubai

Tel: +971 50 376 8098

E-mail: max@enrochemtrading.com

Emergency contact: Max Roux

Office hours: +2782 574 2400

2 COMPOSITION/INFORMATION ON COMPONENTS



| NAME | CAS# | % BY WEIGHT |
|---------------------------|-------------|-------------|
| Ethoxylated Alcohol | Proprietary | 40-60 |
| Quaternary Amine Compound | Proprietary | 40-60 |
| Diluent | Proprietary | 10-20 |

3 HAZARDS IDENTIFICATION



Physical State: Liquid.

Colour: Amber.

Odour: Amine like.

Emergency Overview: Warning! Causes severe eye irritation. May be harmful if swallowed. Harmful to aquatic organisms. May be harmful to environment if released in large amounts. Avoid contact with eyes. Do not ingest. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.

Routes of Entry: Absorbed through skin and eye contact.

Toxicological Information: See Section 11.

POSSIBLE CARCINOGENIC EFFECTS

Ethoxylated Alcohol:

IARC, NTP, OSHA, ACGIH - Not Listed

Quaternary Amine Compound:

IARC, NTP, OSHA, ACGIH - Not Listed

Diluent:

IARC, NTP, OSHA, ACGIH - Not Listed



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4 FIRST AID MEASURES



Eye Exposure: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes while holding eyelids open. Get prompt medical attention.

Dermal Exposure: In case of contact, immediately flush skin with copious amounts of water and soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention. Do not reuse clothing or shoes until thoroughly cleaned.

Inhalation Exposure: Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Get prompt medical attention.

Oral Exposure: Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30cc (2 Tablespoons) syrup of IPECAC*. If IPECAC is not available, give two glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. Get prompt medical attention.

Note to Physician: If victim is a child, give no more than 1 glass of water and 15 cc (1 Tablespoon) syrup of IPECAC. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur. Before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

5 FIRE FIGHTING MEASURES



Flammability of the Product: May be combustible at high temperature.

Auto-ignition temperature: > 150°C

Flash Point: Closed cup; > 93.3°C (Pensky-Martens).

Products of combustion: These products are Carbon oxides (CO, CO₂), Nitrogen oxides (NO, NO₂), Halogenated compounds, Hydrogen chloride.

Protective clothing (fire): Use an approved/certified respirator or equivalent.

Extinguishing Media: Use alcohol type foam, universal foam, dry chemical, carbon dioxide or water spray to extinguish fire.

Firefighting Procedures: Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Empty drums should be completely drained, properly bunged and promptly returned to drum reconitioner, or properly disposed of.

Sensitive to Static Discharge: N/A

Explosion Potential: N/A

6 ACCIDENTAL RELEASE MEASURES



Small Spill: For small spill, dilute with water and mop up. Alternatively take up material with an absorbent such as clay or sand and dispose of properly. Flush area with water to remove trace residue.

Large Spill: Wear respirator and protective clothing as appropriate. Shut off source of leak if it is safe to do so. Dike and contain spilled material. Remove with vacuum trucks or pump to storage/savage containers. Soap up residue with an absorbent such as clay, sand, or other suitable material. Flush area with water to remove trace residue. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

ENVIRONMENTAL PRECAUTIONS

Water Spill: Remove from surface by skimming or with suitable adsorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Land Spill: Eliminate sources of ignition. Prevent additional discharge of material, if possible, to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 15) notify the National Response Centre.



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7 HANDLING AND STORAGE



HANDLING

General Procedures: Keep container closed. Handle and open container with care. Store in a cool, well vented location. Place away from incompatible materials. Do NOT handle or store near an open flame or heat or other sources of ignition. Protect material from direct sunlight. It is not known if this material is a static accumulator. Therefore, use proper grounding procedures. Do NOT pressurise, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning.

Storage Temperature: 18°C minimum to 32°C maximum.

Loading Temperature: 18°C minimum to 40°C maximum.

Loading/ Unloading Viscosity: -10 to 50 CPS.

Special Sensitivity: It is recommended to store this product with a nitrogen blanket to minimise the potential for ethoxylate oxidation. Overheating of an ethoxylate stored with air should be avoided. When an ethoxylate is vigorously mixed in the presence of air or oxygen at temperatures > 40°C, it can undergo exothermic oxidative degradation.

Electrostatic Accumulation Hazard: Unknown, use proper grounding procedure.

Materials/ Coatings Unsuitable: Aluminum, copper, copper alloys.

Precautions: Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids.

STORAGE

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition [spark or flame].

8 EXPOSURE CONTROLS & PERSONAL PROTECTION



ENGINEERING CONTROLS

Ventilation should be provided to control worker exposure and prevent health risk.

PERSONAL PROTECTIVE EQUIPMENT

Eyes: Wear splash goggles/ mask.

Body: Wear appropriate safety clothing.

Respiratory: Wear appropriate respirator when ventilation is inadequate.

Hands: Wear appropriate safety gloves.

Feet: Wear appropriate safety shoes.



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9 PHYSICAL & CHEMICAL PROPERTIES



Physical State: Liquid
Odour: Amine like
Appearance: Dark brown liquid
Colour: Amber
pH @ 20°C (Concentrate): 0.10 - 0.30 (Acidic)
pH @ 20°C (1% in Water): 2.00 - 4.00 (Acidic)
Boiling Point/ Condensation Point: > 100°C
Flash Point : > 190°C
Solubility: Soluble in Cold Water & most Polar Solvents
Specific Gravity/ Density: 1.00-1.05 g/cm³ @ 20°C
Character: Cationic

10 STABILITY & REACTIVITY



Stable: Yes.
Hazardous Polymerization: No.
Stability: N/A
Polymerization: N/A
Conditions to Avoid: Oxidation of alcohol ethoxylates may occur under certain conditions. Avoid overheating (temperatures > 40°C) especially when vigorously mixed with air. See special precautions.
Hazardous Decomposition: Carbon monoxide and unidentified organic compounds may be formed during combustion.

11 TOXICOLOGICAL INFORMATION



This product is expected to have the following toxicity based on comparison to similar products.

TOXICITY TO ANIMALS

Ethoxylated Alcohol: LD50 1378 mg/kg, Oral, Rat
Quaternary Amine Compound: LD50 >2000 mg/kg, Oral, Rat
Diluent: N/A

CHRONIC EFFECT ON HUMANS

Carcinogenic Effects: Classified None by NIOSH.
Mutagenic Effects: Non-Mutagenic for bacteria and/or yeast.
Acute Effects Skin: Slightly irritating to the skin. Practically non-toxic in contact with skin.
Acute Effects Eyes: Severely irritating to the eyes.



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12 ECOLOGICAL INFORMATION



ECOTOXICOLOGICAL INFORMATION

EnviroSURF-226

72hr Algae based EC50: 0.5 mg/L

Quaternary Amine Compound

96hr Trout LC50: 24 mg/L

96hr Algae EC50: 3.9 mg/L

Biodegradability and Ecotoxicity remarks: 28-day(s) CBI based on data for similar material.

Biodegradable/ OECD: Readily biodegradable.

Products of Degradation: These products are Carbon oxides (CO, CO₂), Water, Nitrogen oxides (NO, NO₂), Halogenated compounds.

13 DISPOSAL CONSIDERATIONS



DISPOSAL METHOD

Dispose of this product in accordance with federal, state, and local regulations.

RCRA/ USPA WASTE INFORMATION

If this product becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). However, the waste should be properly characterised to evaluate whether its composition has been modified through procession prior to disposal.

14 TRANSPORT INFORMATION



| REGULATORY INFO | SHIPPING NAME | UN NO | CLASS | PACK GROUP |
|----------------------|---------------|---------------|-------|------------|
| EEC REGULATION | | Not Regulated | | |
| RID/ ADR/ SANS 10228 | | Not Regulated | | |
| IMDG/ UN | | Not Regulated | | |
| ICAO/ IATA | | Not Regulated | | |



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15 REGULATORY INFORMATION



Label for supply: Irritant.

Risk phrases: R41 – Risk of serious damage to eyes.

R52/53 – Harmful to Aquatic Organisms, may cause Long-term adverse effects in the Aquatic Environment.

Safety phrases: S26 – In case of Contact with Eyes, Rinse immediately with plenty of water and seek medical advice.

S39 – Wear eye/ face protection.

S60 – This Material and its Container must be disposed of as Hazardous Waste.

16 OTHER INFORMATION



NOTICE TO READER

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Data Specification sheet issued by: EnroChem Trading DMCC

Contact: Max Roux

