NORFOX DCSA

Viscosity builder & foam stabilizer for use in household & personal care products

INCI Name: Cocamide DEA CAS #61791-31-9

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Contains approximately 5.7% diethanolamine, {CAS #111-42-2} which is classified as hazardous due to the establishment of an ACGIH Threshold Limit Value (See Section 11). This limit is not likely to be approached in the normal use of NORFOX DCSA. Diethanolamine is irritating to the eyes and may cause irritation to the skin. Diethanolamine is listed under the 1990 Federal Clean Air Act and the states of Massachusetts and New Jersey as hazardous. The reportable quantity (RQ) under SARA Title III and CERCLA is 100 lb. for Diethanolamine. NORFOX DCSA does not contain any known carcinogens at 0.1% or above or carcinogens known to be hazardous at lower concentrations. However, diethanolamine may form suspected cancer causing nitrosamines if mixed with nitrites. Diethanolamine is regulated under Canada's WHMIS at a threshold level of 1% as an ingredient in mixtures.

**Exposure limits:** (see Section 11)
**DOT Category:** Not Regulated (Containers up to 1,850#)
**OSHA Category:** IRRITANT, AIR CONTAMINANT

<table>
<thead>
<tr>
<th>HAZARD RATINGS</th>
<th>HEALTH</th>
<th>1-Slight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FIRE</td>
<td>1-Slight</td>
</tr>
<tr>
<td></td>
<td>REACTIVITY</td>
<td>0-Least</td>
</tr>
</tbody>
</table>

SECTION 3 - HAZARDS IDENTIFICATION

DEA - NORFOX DCSA contains approximately 5.7% free diethanolamine which causes eye irritation and may cause skin irritation, blood effects and/or liver and kidney damage. Do not expose to nitrites - may form suspected cancer causing nitrosamines. Harmful if inhaled, absorbed through the skin or swallowed. Low hazard for usual industrial or commercial handling. Harmful to fish and other water organisms. Keep out of waterways and storm sewers.
SECTION 4 - FIRST AID MEASURES

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON

Ingestion: Refer to poison control center or physician.
Skin: Remove contaminated clothing - wash area with potable water.
Eyes: Flush with potable water or sterile buffer. Do not rely on irritation to detect residues. Hold eyelids open to assure complete flushing.
Inhalation: Remove to fresh air - artificial respiration if necessary.

IF ANY SYMPTOMS PERSIST CONSULT A PHYSICIAN

SECTION 5 - FIRE FIGHTING MEASURES

Flash point: 405°F
Explosive Limits: Not a safety factor due to low volatility

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water, Halon
Special Fire Fighting Procedures: Keep containers cool to avoid rupture
NORFOX DCSA will burn if involved in a fire. Hazardous combustion products include carbon monoxide, carbon dioxide, toxic oxides of nitrogen, cyanide. Water run off from fire fighting may be slippery and can cause environmental damage. Dike and collect water used to fight fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Self contained breathing apparatus and protective clothing should be worn while fighting fires involving chemicals.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small amounts may be flushed into sanitary sewer with larger amounts of water. For large spills, dike area and recover as liquid or absorb with sand, sawdust or sweeping compound and dispose of in an approved landfill. Wash area with soap or detergent and water. The reportable quantity (RQ) under SARA Title III & CERCLA is 100 lb. for the diethanolamine component - Containers in excess of 1850# Net Weight exceed this value. Under these circumstances releases to the environment are prohibited by law and require reporting to an environmental agency. Avoid run-off into storm sewers and ditches which lead to waterways.
The toll free number for the U.S. Coast Guard National Response Center is (800)424-8802.

SECTION 7 - HANDLING AND STORAGE

Keep containers closed when not in use. Solutions can be very slippery. Avoid overheating and freezing. When using or diluting, add NORFOX DCSA to water, adding water to NORFOX DCSA can cause a gel to form. Avoid contact with eyes. Avoid breathing vapors from heated material. Wash hands thoroughly after handling. Do not enter storage area unless adequately ventilated.
SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection generally not required. MESA or NIOSH gas mask with ammonia canister if TLV is exceeded. Use supplied air for combustion products. Ventilation is recommended whenever NORFOX DCSA or solutions produce mist. Protective Gloves are recommended for sensitive individuals or long contact. Chemical goggles are recommended for eye protection. Provide nearby safety showers & eye washing (preferably full face) facilities. Exposure limits: (See Section 1)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Straw colored liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild coconut</td>
</tr>
<tr>
<td>Pour Point</td>
<td>-8°C</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Essentially complete - may jell</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Greater than air</td>
</tr>
<tr>
<td>Density</td>
<td>8.3#/gallon</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Negligible</td>
</tr>
<tr>
<td>pH of 1% Solution</td>
<td>10 @ 30°C</td>
</tr>
</tbody>
</table>

SECTION 10 - STABILITY AND REACTIVITY

NORFOX DCSA is thought to be stable. Hazardous polymerization will not occur. As with most organic materials, NORFOX DCSA is incompatible with strong, concentrated oxidizing agents. Norfox DCSA may also react vigorously with strong mineral acids. Avoid burning or combustion.

SECTION 11 - TOXICOLOGY INFORMATION

Threshold limit value: ACGIH Threshold Limit Value (TLV) is 0.46 ppm (2mg/m³) basis diethanolamine component for a time weighted average (TWA) over an 8-Hour workday, 40-hour workweek. This is the average exposure to which nearly all workers may be repeatedly exposed without adverse effect.

Eye Contact: Painful inflammation/reversible damage with prompt first aid
Inhalation: Mist or vapor may irritate nasal passages.
Skin Contact: Contact dermatitis in sensitive individuals.
Ingestion: May cause abdominal discomfort, nausea, vomiting and diarrhea.
Chronic: Free diethanolamine in product may aggravate existing liver/kidney/blood disease or dermatitis.

SECTION 12 - ECOLOGICAL INFORMATION

NORFOX DCSA is biodegradable under most definitions of the term. As with most surface active agents, Norfox DCSA may be toxic to fish and other aquatic life.
SECTION 13 - DISPOSAL CONSIDERATIONS

NORFOX DCSA is used as a foam stabilizing agent in many household and personal care products. Release to sanitary sewer in small amounts is inherent with this type of end use. NORFOX DCSA is biodegradable. No disposal method should be used which would pose an environmental or human health threat including any which would contaminate ground or surface waters.

SECTION 14 - TRANSPORT INFORMATION

Proper: Soap Cleaning and/or Washing Compound (Containers less than 1,850# net) shipping name: RQ, Environmentally Hazardous Substances, Liquid, N.O.S.(Diethanolamine) 9 UN3082, PG III, NAERG 171 (Larger Container)

SECTION 15 - REGULATORY INFORMATION

OSHA Category: IRRITANT - AIR CONTAMINANT TSCA: This material is listed in the TSCA inventory. CERCLA: 1,850# will yield 100# RQ for diethanolamine component.

SECTION 16 - OTHER INFORMATION

To reorder, call Norman Fox & Co. at 323-837-7400