

Material Safety Data Sheet

MSDS Number: 5670 - 15

24 Hour Emergency Assistance: CHEMTREC - Domestic: (800) 424-9300

24 Hour Emergency Assistance: CHEMTREC - International: (703) 527-3887

General Assistance Number: (713) 241-4819

SECTION 1**MATERIAL/COMPANY IDENTIFICATION**

MATERIAL IDENTITY: NEODOL® 25-12 Alcohol Ethoxylate

COMPANY ADDRESS: Shell Chemical Company, P.O. Box 4320, Houston, TX 77210-4320, USA

SECTION 2**COMPOSITION**

COMPONENTS	CAS#	CONCENTRATION
Mixture of C12-15 Alcohol Ethoxylates with average 12 moles of ethylene oxide per mole of alcohol	68131-39-5	100 %weight

SECTION 3**HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

Appearance & Odor: Pasty liquid to waxy solid. Mild odor.

Health Hazards: Causes severe eye irritation. May be harmful if swallowed.

Health Effects**Eye Contact:**

Severely irritating to the eyes causing pain, redness, swelling and blurred vision.

Skin Contact:

May be slightly irritating to the skin.

Ingestion:

May be harmful if swallowed.

SECTION 4**FIRST AID MEASURES****Eye:**

Flush eyes with large amounts of water for at least 15 minutes, by the clock, while holding eyelids open. Transport to nearest medical facility for additional treatment.

Skin:

Flush exposed area with water and follow by washing with soap if available.

Ingestion:

DO NOT induce vomiting. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. DO NOT GIVE LIQUIDS TO A DROWSY, CONVULSING OR UNCONSCIOUS PERSON. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Transport to nearest medical facility for additional treatment.

SECTION 5**FIRE FIGHTING MEASURES**

Flash Point: 433°F / 222.78°C

Extinguishing Media:

Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO₂) to extinguish flames.

Fire Fighting Instructions:

Material will not burn unless preheated. Clear fire area of all non-emergency personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. Cool surrounding equipment, fire-exposed containers and structures with water. Container areas exposed to direct flame contact should be cooled with large quantities of water (500 gallons water per minute flame impingement exposure) to prevent weakening of container structure.

SECTION 6**ACCIDENTAL RELEASE MEASURES**

May burn although not readily ignitable.

Protective Measures:

Wear appropriate personal protective equipment (refer to Section 8) when responding to spills.

Spill Management:

Use cautious judgment when cleaning up large spills. Shut off source of leak if safe to do so. Dike and contain spill. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue. Contain run-off from residue flush and dispose of properly. Place in container for proper disposal. Prevent entry into waterways, sewer, basements or confined areas. For small spills: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Disposal:

Proper disposal should be evaluated based on regulatory status of this material (refer to Section 13), potential contamination from subsequent use and spillage, and regulations governing disposal in the local area.

Reporting:

Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

SECTION 7**HANDLING AND STORAGE**

Do not taste or swallow. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Handling:

When ethoxylates are vigorously mixed in the presence of air or oxygen at temperatures > 325° F, they can cause exothermic oxidative degradation which may result in self-heating and autoignition. Ethylene oxide (EO), an extremely flammable and toxic gas, and other hazardous vapors may evolve and collect in the headspace of storage tanks, transport vessels and other enclosed containers.

Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Keep containers closed when not in use. Store in a cool, dry place with

adequate ventilation. Keep away from open flames and high temperatures.

Storage:

Keep containers closed when not in use.

Do not mix in the presence of air or oxygen at temperatures greater than 325° F. Do not overheat ethoxylates stored under air. Ethoxylates should be stored under a nitrogen blanket.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Controls

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Appropriate measures include:

Adequate ventilation to control airborne concentrations. Eye washes and showers for emergency use.

Personal Protective Equipment

Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

Eye Protection:

Chemical goggles

Skin Protection:

Use protective clothing which is chemical resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

Respiratory Protection:

If occupational exposure may or does exceed 1 ppm EO, respirator is required. NIOSH has approved a full-face canister respirator for < 50 ppm which has an end-of-service life indicator.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Pasty liquid to waxy solid. Mild odor.

Boiling Point	> 500 °F	Coefficient of Expansion	0.0034 lb/gal
Flash Point	433 °F [Pensky - Martens Closed Cup]	Melting Point	69 °F - 93 °F
Pour Point	81 °F	Solubility (in Water)	Complete, may form gel.
Specific Gravity	999 @ 122 °F	Stability	Stable
Storage Temp	90 °F - 125 °F	Vapor Density (Air=1)	26

Vapor Pressure	< 0.1 mmHg @ 100 °F	Viscosity	53 cSt @ 100 °F
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SECTION 10**REACTIVITY AND STABILITY****Stability:**

Material is stable under normal conditions.

Conditions to Avoid:

Avoid high temperatures. Avoid overheating, especially when mixed with air.

Materials to Avoid:

Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products:

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11**TOXICOLOGICAL INFORMATION****Acute Toxicity**

Material Tested	Effects	Test Results
Mixture of C12-15 Alcohol Ethoxylates with average 12 moles of ethylene oxide per mole of alcohol	Dermal - LD50	2.5 g/kg (Rabbit)
Mixture of C12-15 Alcohol Ethoxylates with average 12 moles of ethylene oxide per mole of alcohol	Oral - LD50	1.8 g/kg (Rat)

Eye Irritation:

Severe [Rabbit]

Skin Irritation:

Minimal [Rabbit]

Other Information:

The trace amounts of ethylene oxide (EO) in this product are not expected to result in either immediate or long term health effects when the material is handled according to precautions in this sheet (refer to sections 6 and 8). You should be aware though, that EO is a cancer hazard and also a reproductive hazard. Repeated exposure to EO may be harmful.

SECTION 12**ENVIRONMENTAL FATE AND EFFECTS**

This section will be updated as ecological reviews are completed.

SECTION 13**DISPOSAL CONSIDERATIONS**

General Recommendations:

If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local regulations.

SECTION 14**TRANSPORT INFORMATION****US Department of Transportation Classification:**

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

International Air Transportation Association Classification:

This material is not classified as hazardous under IATA regulations.

International Maritime Organization - IMDG:

This material is not classified as hazardous under IMDG regulations.

SECTION 15**REGULATORY INFORMATION**

The regulatory information provided is not intended to be comprehensive. Other federal, state and local regulations may apply to this material.

Federal Regulatory Status**Superfund Amendment & Reauthorization Act (SARA) Title III:****SARA Hazard Categories(311/312):**

Immediate (Acute) Health Hazard.

Toxic Substances Control Act (TSCA) Inventory Status:

This material is listed on the EPA TSCA Inventory of Chemical Substances.

State Regulatory Status

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):

Ethylene Oxide (75-21-8)

< 6 ppm (m)

CA_65 C/R

CA_65 C/R = The chemical identified with this code is known to the state of California to cause both cancer and birth defects or other reproductive harm.

SECTION 16**OTHER INFORMATION**

HMIS Rating (Health, Fire, Reactivity): 2, 1, 0

NFPA Rating (Health, Fire, Reactivity): 2, 1, 0

Revision#: 15

Revision Date: 12/05/2001

Revisions since last change (discussion): This MSDS has been revised because Shell Chemical Company has made changes to the Material Safety Data Sheet document template. There are no changes to the health, safety, precautionary data, or regulatory data. We do, however, encourage you to take the opportunity to reread the sheet and review the information.

Product Codes: 38012, V2375

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. 27090-485-100R-12/04/2001