

Material Safety Data Sheet (MSDS) for Monoethanolamine Lauryl Sulfate

Manufacturer: Shandong Ruisheng Pharmaceutical Excipients Co., Ltd.

Packaging Specifications: 20KG/drum, 200KG/drum, 500ml/bottle

Manufacturer's Address: Middle Section of West Ring Road, Dong'e County,
Liaocheng City, Shandong Province

Contact Number: 0635-5018008

Section 1: Chemical Product and Company Identification

Chemical Name: Monoethanolamine Lauryl Sulfate

English Name: (2-Hydroxyethyl)ammonium dodecylsulphate; MEA-Lauryl Sulfate

Section 2: Composition/Information on Ingredients

Molecular Formula: $C_{14}H_{33}NO_5$ S

It is prepared by the sulfation of lauryl alcohol followed by salification with monoethanolamine.

This product is a colorless to yellow transparent liquid.

Section 3: Hazards Identification

Hazard Class (GHS): Skin Irritation (Category 2), H315: Causes skin irritation; Eye Irritation (Category 2), H319: Causes serious eye irritation

Routes of Exposure: Ingestion

Health Hazards: Harmful to the body if ingested in large quantities

Environmental Hazards: Minor

Section 4: First-Aid Measures

General Advice: Consult a physician.

Skin Contact: Immediately remove contaminated clothing and rinse the skin with plenty of running water for at least 15 minutes; consult a physician if skin irritation



symptoms occur.

Eye Contact: Immediately rinse the eyes with plenty of running water or normal saline from the inner canthus to the outer for more than 15 minutes; roll the eyes as much as possible during rinsing and avoid residual contact lenses (remove immediately if worn and easy to take out); seek immediate medical attention if discomfort (e.g., redness, stinging) persists after rinsing.

Inhalation: Quickly leave the scene to a place with fresh air and keep the respiratory tract unobstructed; give oxygen if breathing is difficult; perform artificial respiration immediately and seek medical attention if breathing stops.

Ingestion: Do not induce vomiting to avoid airway obstruction by vomit; immediately drink a large amount of warm water for dilution and seek medical attention with the product container or label; do not give anything by mouth to an unconscious person.

Section 5: Fire-Fighting Measures

Property: Non-flammable liquid (no definite flash point data, not a flammable dangerous good); no obvious combustion and explosion risk when exposed to open fire and high temperature, but harmful flue gas may be generated during large-scale combustion.

Extinguishing Media: Use dry chemical powder, sand, water spray or foam fire extinguishers; avoid direct impact with a large amount of high-pressure water flow to prevent material splashing and pollution expansion.

Special Hazards: Combustion may produce toxic and harmful flue gas such as carbon dioxide, carbon monoxide, sulfur dioxide and nitrogen oxides.

Special Protective Equipment for Firefighters: Firefighters must wear self-contained breathing apparatus (SCBA) and fire protective clothing; fight the fire on the upwind direction, keep a safe distance and avoid contact with flue gas generated by combustion.

Section 6: Accidental Release Measures

Protective Measures

Wear protective gloves and goggles to avoid direct contact with the spill; ensure good ventilation in the spill area.

Environmental Precautions

Do not allow the product to enter sewage systems or any water sources.

Spill/Leakage Handling

Collect with dry sand, vermiculite or other inert absorbents; put the collected spill into a sealed container, mark it as "hazardous waste" and dispose of it in accordance with

local regulations.

Section 7: Handling and Storage

Store in a sealed container.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Adopt ventilation and air exchange devices to keep the air in the operation area circulating; set up spill emergency treatment facilities to prevent material leakage and diffusion.

Respiratory Protection: No special protection is required for general operation; wear a dust mask in poorly ventilated areas or during large-scale handling.

Eye Protection: Wear chemical safety goggles or face shields to avoid splashing into the eyes.

Skin Protection: Wear chemical-resistant protective gloves (e.g., nitrile gloves) and protective clothing to avoid direct skin contact.

Hand Protection: Wear protective gloves throughout the operation and wash hands promptly after operation.

Other Protection: Wear non-slip and leak-proof work shoes; take a shower and change clothes after operation.

Section 9: Physical and Chemical Properties

Appearance: Colorless to yellow transparent liquid

pH Value: 8.0 ~ 10.0

Kinematic Viscosity: 470 ~ 900 mm²/s at 100°C

Viscosity: Not more than 200 mPa·s (determined by viscosity measurement method)

Water Content: Not less than 68.0% (determined by water content measurement method)

Section 10: Stability and Reactivity

Stability: Stable under normal temperature and pressure; the shelf life is usually 12-24 months under specified storage conditions; avoid long-term exposure to high temperature and strong light, otherwise decomposition may occur.

Reactivity: Incompatible Substances: Strong oxidizing agents, strong acids, nitrosation systems, nitrite substances

Conditions to Avoid: High temperature (>50°C), open fire, strong light irradiation, humid environment

Decomposition Products: High temperature or contact with incompatible

substances may cause decomposition to produce lauryl alcohol, sulfuric acid, ethanolamine and other products.

Section 11: Toxicological Information

Monoethanolamine Lauryl Sulfate is widely used in the pharmaceutical industry due to its non-toxicity and stable chemical properties. It is commonly used as a solvent material for topical lotions and a surfactant—a substance that can reduce the surface tension between two immiscible phases (e.g., oil and water). It is applied in personal care products, cleaners and cosmetics. For example, it can be used as a solubilizer to improve the solubility of poorly soluble substances such as oils and proteins, making products more stable.

It can also be used as a foaming agent. Due to its good foaming performance and ability to produce rich foam, it is used as a foaming agent in cleaning and decontamination products; rich foam helps to clean and remove dirt better.

Acute Toxicity: Oral acute toxicity - LD_{50} (Rat) > 2000 mg/kg (low toxicity);
Dermal acute toxicity - LD_{50} (Rabbit) > 5000 mg/kg (low toxicity)

Other Toxicological Data:

- Sensitization: No definite sensitization reports, not a common sensitizing component
- Genotoxicity: No genotoxicity shown in in vitro tests
- Chronic Toxicity: No definite chronic toxicity manifestations in long-term low-dose exposure

Section 12: Ecological Information

This product can be partially degraded by microorganisms and is a biodegradable chemical ($BOD_5 / COD > 0.3$).

Other Information: It has slight toxicity to aquatic organisms such as fish and algae, and direct discharge into water bodies should be avoided.

No definite EC_{50} and LC_{50} data are available; it is recommended to handle in accordance with the ecological protection requirements for general surfactants and avoid large-scale pollution of water bodies and soil.

Section 13: Disposal Considerations

Small Quantity Disposal: Dilute with a large amount of water and discharge up to the standard through the sewage treatment system (in compliance with local sewage discharge standards).

Large Quantity Disposal: Entrust a qualified hazardous waste treatment agency for disposal by high-temperature oxidation or biochemical treatment.

Container Disposal: Empty containers must be cleaned thoroughly to remove

residual materials, then disposed of as recyclable containers or hazardous waste containers.

Section 14: Transport Information

Transport Hazard Class: Not specified

Environmentally Hazardous: No

Marine Pollutant: No

Special Precautions for Users: Not applicable

Section 15: Regulatory Information

Hazardous Chemicals List: The substance is not listed.

Chemical Safety Assessment: Not yet conducted.

Section 16: Other Information

None

Shandong Ruisheng Pharmaceutical Excipients Co., Ltd.

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