



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name : Sodium Alpha-olefin Sulfonate

CAS No. : 68439-57-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, manufacture of substances.

1.3 Details of the supplier of the safety data sheet

Company: Aurora Industry Co.,Ltd.

Tel: 0411-82288674

Address: Room 7033, No.9-1, Haifu Road, Dalian Free Trade Zone, China

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Physical Hazards: Not classified.

Health Hazards

Acute toxicity, oral - Category 4

Skin corrosion/irritation - Category 2

Serious eye damage/eye irritation - Category 1

Environmental Hazards

Hazardous to the aquatic environment, acute hazard - Category 2

Hazardous to the aquatic environment, long-term hazard - Category 3

OSHA-defined hazards: Combustible dust

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statement

Harmful if swallowed. Causes serious eye damage. Causes skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects. May form combustible dust concentrations in air.

Precautionary statement

Prevention



Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces.
- No smoking. Ground/bond container and receiving equipment. Wear eye/face protection. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves. Prevent dust accumulation to minimize explosion hazard.

Response

If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage

Store away from incompatible materials

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified (HNOC): None known

Supplemental information: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name Sodium Alpha-olefin Sulfonate

CAS Number 68439-57-6

COMPONENT	CAS NUMBER	CONCENTRATION
Sodium Alpha-olefin Sulfonate	68439-57-6	80 – 90%
Sodium xylene sulfonate (SXS)	1300-72-7	5 – 10%
Other components below reportable levels		5 – 10%

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Skin Contact: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye Contact: Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion: Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed: Dusts may irritate the respiratory tract, skin and eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.



General Information: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Apply extinguishing media carefully to avoid creating airborne dust.

Unsuitable Extinguishing Media: None known.

Specific Hazards arising from the chemical: Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. Class II Dust for National Electric Code (NFPA 70) During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Firefighting equipment/instructions: In case of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Move containers from fire area if you can do so without risk.

Specific methods: Cool containers exposed to flames with water until well after the fire is out.

General fire hazards: May form combustible dust concentrations in air.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Use only non-sparking tools. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up: Eliminate all ignition sources(no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools.

Small Spills: Stop the flow of material, if this is without risk. Collect spillage. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Large Spills: Wet down with water and dike for later disposal. Prevent product from entering drains. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions: Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or



spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Eliminate all sources of ignition. Minimize dust generation and accumulation. Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Occupational exposure limits: No exposure limits noted for ingredient(s).

Biological limit values: No biological exposure limits noted for the ingredient(s).

Appropriate engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dusthandling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection



Hand protection: Wear appropriate chemical resistant gloves.

Other: Wear appropriate chemical resistant clothing.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state: Liquid

Form: Liquid

Color: light yellow.

Odor: Not available.

Odor threshold: Not available.

pH: 8 - 10 (5% in water)

Melting point/freezing point: Not available.

Initial boiling point and boiling range: Not available.

Flash point: > 201.0°F (> 93.9°C) Pensky-Martens Closed Cup

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower: Not available.

Flammability limit - upper: Not available

Explosive limit - lower: Not available

Explosive limit - upper: Not available

Vapor pressure: Not available

Vapor density: Not available

Relative density: Not available

Solubility (water): Not available

Auto-Ignition temperature: 752°F (400°C)

Decomposition temperature: Not available

Viscosity: Not available

Other Information

Density: 0.40 - 0.50 g/cm³

Dust explosion properties

P_{max}: 7.3 bar

K_{st}: 132 bar m/s

Limiting oxygen concentration (LOC): 13.2% v/v

Minimum explosible concentration (MEC): Not available



Minimum Ignition energy (MIE) - dust cloud: < 1000 mJ

Particle size: 60µm (69% < 75 µm)

10. STABILITY AND REACTIVITY

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Minimize dust generation and accumulation.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation: No adverse effects due to inhalation are expected.

Skin contact: Causes skin irritation

Eye contact: Causes serious eye damage.

Ingestion: Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics:

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin Irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity: Harmful if swallowed.

Dermal LD50 - Rabbit: > 2000mg/kg

Oral LD50 - Rat: 642 mg/kg

Skin corrosion/irritation: causes skin irritation

Serious eye damage/eye irritation: Causes serious eye damage

Respiratory or skin sensitization

Respiratory sensitization: Not available

Skin sensitization: This product is not expected to cause skin sensitization

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic



Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA

IARC Monographs, Overall Evaluation of Carcinogenicity: Not listed

US National Toxicology Program (NTP) Report of Carcinogens: Not listed

US, OSHA, Specifically Regulated Substances (29 CFR 1910.1001-1050): Not regulated

Reproductive Toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure: Not applicable

Specific Target organ toxicity - repeated exposure: Not applicable

Aspiration Hazard: Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicity: Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Acute Aquatic Toxicity

Algae EC50 - Algae: 42.3 mg/L (72 hours)

Crustacea EC50 - Crustacea: 4.48 mg/L (48 hours)

Fish EC50 - Fish: 2.6 mg/L (96 hours)

Sodium (C14-16) olefin sulfonate (CAS 68439-57-6)

Crustacea EC50 - Water Flea (Ceriodaphnia dubia): 4.14 - 4.95 mg/L (48 hours)

Persistence and degradability: Readily biodegradable

Bioaccumulative potential: Not available

Mobility in Soil: Not available

Other adverse effects: Not available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

14. TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods.

IATA: Not regulated as dangerous goods.

IMDG: Not regulated as dangerous goods.

Transport In bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION



US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.

SARA 304 Emergency release notification: Not regulated.

US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard: Yes

Delayed Hazard: No

Fire Hazard: Yes

Pressure Hazard: No

Reactivity Hazard: No

SARA 302 Extremely hazardous substance: Not listed.

SARA 311/312 Hazardous chemical: Yes

SARA 313 (TRI reporting): Not regulated.

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130): Hazardous substance

Safe Drinking Water Act (SDWA): Not regulated.

US State Regulations

US California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100): Not listed.

US Massachusetts RTK - Substance List: Not regulated.

US Pennsylvania Worker and Community Right-to-Know Law: Not listed.

US Rhode Island RTK: Not regulated.

International Inventories

Country(s) or region	Inventory name	On inventory
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes



Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory (NZIoC)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

16. OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall AUCO be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if AUCO has been advised of the possibility of such damages.