MATERIAL SAFETY DATA SHEET

Chemax, Inc.

1. Chemical Product and Company Identification

Product Name: Sorbax SMO
Product Code: P60400
Product Description: Sorbitan Monooleate

Chemax, Inc.
P.O. Box 6067
Greenville, SC 29606

Emergency Telephone Numbers
Transportation:
CHEMTREC 1-800-424-9300
(703-527-3887 Outside United States)
Information:
Chemax, Inc. 864-277-7000

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Principle Components</th>
<th>CAS#</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorbitan, Mono-9-octadecenoate, (Z)-</td>
<td>1338-43-8</td>
<td>100</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview
Clear yellow to amber liquid, fatty odor.
Causes eye, skin, and mucous membrane irritation.
Spills are slippery, may cause falls.

Potential Health Effects
Irritant (Eyes, Skin, Mucous Membranes)

Routes of Exposure
Contact, Inhalation, Ingestion
Target Organ Effects

Eyes

Contact causes eye irritation.

Skin

Contact causes skin irritation.

Ingestion

May cause irritation to digestive tract including nausea, vomiting, diarrhea.

Inhalation

Inhalation of vapors or mists may cause irritation to respiratory passages.

Carcinogenicity

NTP ......................Not listed.
IARC ........................Not listed.
OSHA ........................Not listed.

4. First Aid Measures

Eye Contact

Immediately flush with plenty of water for at least 15 minutes. Get medical attention, if irritation persists.

Skin Contact

Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash and dry clothing before reuse.

Ingestion

If swallowed, give milk or water to dilute. Seek medical attention immediately.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
5. Fire Fighting Measures

Flammable Properties

- Flash Point (°F/°C)..............................: 475°F/246°C
- Test Method..................................: Cleveland Open Cup
- Flammable Limits (Percent by Volume)
  - Lower Explosion Limit..................: Not Known
  - Upper Explosion Limit...................: Not Known
  - Flammability Classification..............: Not Classified
  (As per 29 CFR 1910.1200)

Extinguishing Media

Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

Hazardous Products of Combustion

Oxides of carbon, smoke, and fumes.

Fire Fighting Instructions

Fire fighters should wear full protective gear including self-contained breathing apparatus (SCBA) with full face shield operated in positive pressure mode, and full protective clothing.

Closed containers may swell and rupture when exposed to extreme heat. Water spray may be used to cool containers. Avoid spraying of water directly into containers of burning material as frothing may result.

Water runoff may cause environmental damage. Dike and collect water used to fight fires.

6. Accidental Release Measures

Personal Precautions

Individuals involved in clean up activities must use appropriate protective equipment as listed in Section 8. This material forms slippery surfaces on floors, posing an accident risk.

Environmental Precautions

If material is released into the environment (air, land, water - via sewage system), the user should determine whether spill must be reported to appropriate local, state, and/or federal authorities.

Spill Response Procedures

Confine spill by digging with sand, earth, or inert absorbent material. Absorb onto suitable material (sand, vermiculite, etc.), then shovel into suitable container for disposal.
7. Handling and Storage

Handling

Avoid contact with eyes, skin, and clothing.
Wash thoroughly after handling.

Storage

Keep container closed.
Empty containers may retain product residue, precautions apply to empty containers.

8. Exposure Controls/Personal Protection

Engineering Controls

Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment

Eye/face - Wear safety glasses with side shields (or goggles) and a face shield.

Respiratory - A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be used when respiratory protection is required.

Skin/Body - For brief contact, body covering-clothing should be worn. Use neoprene or butyl rubber gloves.

Other Precautions - Safety shower and eye wash station should be located in exposure area. Reduce exposure by proper use of personal protective equipment. Wash hands and face before eating, drinking, or smoking.

Occupational Exposure Limits

No exposure limits established for this product, or individual components.
9. Physical and Chemical Properties

Physical state .....................................................: Clear liquid
Color .............................................................: Yellow to amber
Odor ..............................................................: Fatty
Specific gravity (water = 1.0) ................................: 0.998
Solubility (in water) ...........................................: Insoluble
pH .................................................................: No information
Vapor pressure (mmHg) .........................................: No information
Vapor density (air = 1) .........................................: No information
Boiling point (°F/°C) ............................................: No information
Percent volatile ..................................................: <2%

10. Stability and Reactivity

Conditions to Avoid

Stability ...........................................................: Stable
Conditions to Avoid .............................................: High temperatures
Materials to Avoid ..............................................: Oxidizing materials
Hazardous Decomposition Products .......................: Oxides of carbon may be emitted upon burning
Hazardous Polymerization ...................................: Will not occur

11. Toxicological Information

There is no toxicological data available on the product.

12. Ecological Information

There is no ecological data available on the product.

13. Disposal Considerations

As originally offered, this product if disposed of, is not considered a hazardous waste under current Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). State and local regulations should also be consulted regarding proper disposal.
14. Transport Information

Land

Department of Transportation (DOT)
Not Regulated

Air

International Air Transport Association (IATA)
Not Regulated

Sea

International Maritime Organization (IMO)
Not Regulated

15. Regulatory Information

U.S. Federal Regulations

Toxic Substances Control Act (TSCA) Information
The component(s) of this product are listed on the TSCA Chemical Substances Inventory.

Superfund Amendments and Reauthorization Act (SARA Title III)
Section 311/312 Hazard Category Immediate Health Hazard.

Section 313 Listed Chemical Components
Chemical Name or Category : None
CAS# : NA
Concentration : NA

International Regulations

Canadian Environmental Protection Act (CEPA)
Listed in the Domestic Substance List

European Inventory of Existing Commercial Chemical Substances (EINECS)
Listed

February 8, 2000
MSDS: Sorbax SMO
Japanese List of Existing and New Chemical Substances (as regulated by the Ministry of International Trade and Industry MITI)
Listed

Australian Inventory of Chemical Substances (AICS)
Listed

Korean Existing Chemical List (ECL)
Listed

European Communities (EC) Classification

Hazard symbol(s)........................................: X, (Irritant)
Risk phrases...........................................: R36/37/38 - Irritating to eyes, respiratory system and skin.
Safety phrases........................................: S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16. Other Information

MSDS Revision Status

MSDS Date..................: February 8, 2000
Last Revision Date........: April 25, 1996
Reason for Revision......: Regulatory Information Update
Prepared By...............: C. Patterson

Freight Classification (National Motor Freight Classification)

Fatty Acid Esters, NOI, Item 144920, Class 65

Hazardous Materials Information System (HMIS) Rating

Health.........................: 2
Reactivity.....................: 0
Flammability...................: 1