



MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

Product: Oleic acid

This MSDS is valid for all grades and catalog #'s

Synonyms: 9-Octadecenoic acid; oleinic acid; cis-9-octadecanoic acid; Elaidic acid

Formula: C18H34O2

Manufacturer: PHARMCO-AAPER
58 Vale Road
Brookfield, Connecticut 06804, USA
Phone (203) 740-3471
Fax (203) 740-3481

1101 Isaac Shelby Drive
Shelbyville, KY 40065
Phone (502) 633-0650
Fax (502) 633-0685

Emergency Contact:
CHEMTREC 1-800-424-9300

SECTION II

COMPOSITION /INFORMATION ON INGREDIENTS

| % by weight | Material | CAS # | TLV/PE L | LC50/LD50 |
|-------------|----------|-------|----------|-----------|
|-------------|----------|-------|----------|-----------|

| | | | | |
|-----|------------|----------|---------------|--|
| 100 | Oleic acid | 112-80-1 | Not available | ORAL (LD50): Acute: 25000 mg/kg [Rat]. 28000 mg/kg [Mouse]. |
|-----|------------|----------|---------------|--|

SECTION III

HAZARDS IDENTIFICATION

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.

SECTION IV

FIRST AID

Obtain medical attention for all cases of over-exposure.

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Hazardous Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Hazardous Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Hazardous Ingestion: Not available.

SECTION V

FIRE FIGHTING MEASURES

Fire:

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition temperature: 363°C (685.4°F)

Flash point: CLOSED CUP: 188.89°C (372°F). OPEN CUP: 198.89°C (390°F) - 218.33 C (425 F).

Flammable limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards: Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Extinguishing Media: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Information: Not available.

SECTION VI

SPILL/ACCIDENTAL RELEASE MEASURES

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill: If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

SECTION VII

HANDLING AND STORAGE

Precautions: Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers. Air Sensitive

SECTION VIII

EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

SECTION IX

PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance: Liquid.

Molecular Weight: 282.47 g/mole

Odor: Peculiar Lard-Like odor

Taste: Not available

Color: Colorless to light yellow.

pH (1% Solution in Water): Not applicable.

Boiling Point: 286.11°C (547°F)

Melting Point: 16.3°C (61.3°F)

Critical Temperature: Not available.

Specific Gravity: 0.895 (Water = 1)

Vapor Pressure (mm Hg): Not available.

Vapor Density (Air=1): 9.7(Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Water/Oil Dist. Coefficient: Not available.

Ionicity (in water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, acetone

Solubility: Soluble in methanol, diethyl ether, acetone.

Insoluble in cold water. Soluble in chloroform, most organic solvents, benzene, alcohol, carbon tetrachloride, and fixed and volatile oils.

SECTION X

STABILITY/REACTIVITY INFORMATION

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat

Incompatibilities: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Information: Air and light sensitive. On exposure to air, especially when impure, it oxidizes and acquires a yellow to brown color and rancid odor. Also incompatible with perchloric acid, and powdered aluminum.

SECTION XI

TOXICOLOGICAL INFORMATION

Routes of Entry: Absorbed through skin. Eye contact.

Toxicity to Animals: Acute oral toxicity (LD50): 25000 mg/kg [Rat].

Chronic Effects on Humans: Not available

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Information on Toxicity to Animals: Not available.

Special Information on Chronic Effects/Toxicity on Humans: Human: passes the placental barrier, detected in maternal milk. May cause cancer based on animal test data. No human data found. May affect genetic material (mutagenic). Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: May cause eye irritation. Ingestion: May cause digestive tract irritation. It is expected to be a low hazard for usual industrial handling. Inhalation: May cause respiratory tract irritation. It is expected to be a low hazard to usual industrial handling. Note: According the Registry of Toxic Effects of Chemicals, when Oleic acid was administered to rats and mice through intravenous injection, behavior and respiration were affected.

SECTION XII

ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Information on Products of Biodegradation: Not available.

**SECTION XIII
DISPOSAL CONSIDERATIONS**

Waste Disposal: Recycle to process, if possible. Consult your local or regional authorities.

**SECTION XIV
TRANSPORTATION INFORMATION**

DOT Classification:

UN: 71

Special Provisions for Transport: 72

**SECTION XV
REGULATORY INFORMATION**

Federal and State Regulations: Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: **NONE**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are: **NONE**

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA): No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCCL (EEC): R36/38- Irritating to eyes and skin.

Protective Equipment: Gloves. Lab coat. Not applicable. Splash goggles.

References: Not available.

Other Special Considerations: Not available.

The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.