SECTION 1: IDENTIFICATION

Product Identifier
Product Form: Substance
Product Name: FA-1880 Oleic Acid
CAS No: 112-80-1

Intended Use of the Product
Use of the Substance/Mixture:
Multiple uses including as emulsifier, emollient, plasticizer, humectants, sweetener, anti-freeze, in surface coatings and paints, cosmetics, drug and food products. Intermediate for making glycerol derivatives.

Name, Address, and Telephone of the Responsible Party
Company
Peter Cremer North America, LP
3117 Southside Ave.
Cincinnati, OH 45204
1-513-471-7200
1-877-901-7262 (Toll free)

Emergency Telephone Number
Emergency Number : CHEMTREC: 1-800-424-9300 US and Canada; 1-703-527-3887 for calls originating elsewhere

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture
Classification (GHS-US)
Not classified

Label Elements
GHS-US Labeling
No labeling applicable

Other Hazards
Unknown Acute Toxicity (GHS-US)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances
Name : FA-1880 Oleic Acid
CAS No : 112-80-1

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>% (w/w)</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oleic acid</td>
<td>(CAS No) 112-80-1</td>
<td>70 - 95</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures
General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.
Skin Contact: Wash skin with soap and water upon contact. Remove contaminated clothing. Obtain medical attention if irritation
SAFETY DATA SHEET, FA-1880 Oleic Acid

SECTION 4: FIRST AID MEASURES

develops or persists. Wash clothing before reuse.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

**Ingestion:** Do NOT induce vomiting. Get medical attention.

**Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Risk of thermal burns on contact with molten product. If product is heated, vaporization can occur. Eye, skin, and upper respiratory irritation may occur.

**Inhalation:** Overexposure may be irritating to the respiratory system.

**Skin Contact:** Mild, primary skin irritation with prolonged or repeated contact.

**Eye Contact:** Accidental exposure to the eyes will cause only a mild but transient irritation.

**Ingestion:** May cause irritation of gastrointestinal tract.

**Chronic Symptoms:** None expected under normal conditions of use.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**
If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media:** Dry chemical, foam, carbon dioxide (CO₂).

**Unsuitable Extinguishing Media:** Do not use water.

**Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Cool containers with flooding quantities of water until well after fire is out.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO₂).

**Reference to Other Sections:** Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** An appropriate NIOSH approved respirator should be used if a mist, vapor or dust is generated. Wear suitable gloves, eye/face protection and protective clothing.

**For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Avoid all unnecessary exposure.

**For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

**Environmental Precautions**

Prevent entry to sewers and public waters.

**Methods and Material for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container.
SECTION 6: ACCIDENTAL RELEASE MEASURES

Reference to Other Sections
See section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Do not store near possible sources of ignition.


SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator whenever exposure may exceed established Occupational Exposure Limits.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Water white to yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Musty, fatty</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt; 500 °F (260 °C) @ 760 mm Hg</td>
</tr>
<tr>
<td>Flash Point</td>
<td>408 °F (208.9 °C) PMCC</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET, FA-1880 Oleic Acid

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt; 1 mm Hg @ 72° F (22° C)</td>
</tr>
<tr>
<td>Relative Vapor Density at 20 °C</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>0.85-0.90 @ 49/25°C</td>
</tr>
<tr>
<td>Solubility</td>
<td>Negligible at 72 °F (22 °C)</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Mechanical Impact</td>
<td>Not expected to present an explosion hazard due to mechanical impact.</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Static Discharge</td>
<td>Not expected to present an explosion hazard due to static discharge.</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: None identified.

Incompatible Materials: Strong oxidizers.

Hazardous Decomposition Products: Does not decompose up to 204° C (400° F). Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified
LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Causes eye irritation.
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available
Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: May cause skin irritation.
Symptoms/Injuries After Eye Contact: Causes eye irritation.
Symptoms/Injuries After Ingestion: May cause irritation of gastrointestinal tract.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LD50 Oral Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oleic acid (112-80-1)</td>
<td>25000 mg/kg</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION
SAFETY DATA SHEET, FA-1880 Oleic Acid

SECTION 12: ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>FA-1880 Oleic Acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fish 1</td>
<td>205 mg/l (Exposure time: 96 h - Species: Fathead Minnows)</td>
</tr>
<tr>
<td>LC50 Fish 2</td>
<td>66.6 mg/l (Exposure time: 96 h - Species: Bluegills)</td>
</tr>
</tbody>
</table>

Persistence and Degradability  Not available
Bioaccumulative Potential  Not established
Mobility in Soil  Not available
Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT  Not regulated for transport
In Accordance with IMDG  Not regulated for transport
In Accordance with IATA  Not regulated for transport
In Accordance with TDG  Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations
FA-1880 Oleic Acid (112-80-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations
FA-1880 Oleic Acid (112-80-1)
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Canadian Regulations
FA-1880 Oleic Acid (112-80-1)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification  Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date  05/29/2015
Other Information  This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document
Peter Cremer North America, LP
1-513-471-7200
1-877-901-7262 (Toll Free)
SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

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SDS NA Peter Cremer