Oleic Acid
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 12/17/2013 Supersedes: 11/06/2013 Version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier
Product Form: Substance
Product Name: Oleic Acid
CAS No: 112-80-1; 67701-08-0
Synonyms: Octadecenoic Acid

1.2. Intended Use of the Product
Use of the substance/mixture: Per FDA 21CFR - Coatings on fresh citrus fruit, fatty acids, chemicals used in washing or to assist in the peeling of fruits and vegetables, defoaming agents, adhesives, resinous and polymeric coatings, surface lubricants used in the manufacture of metallic articles, substances migrating from cotton and cotton fabrics used in dry food packaging, substances migrating to food from paper and paperboard products

1.3. Name, Address, and Telephone of the Responsible Party
Company
Acme-Hardesty Co.
450 Sentry Parkway
Blue Bell, PA 19422
T 866-226-3834  T 215-591-3610
www.acme-hardesty.com

1.4. Emergency Telephone Number
Emergency Number: 800-424-9300
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

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

2.2. Label Elements
GHS-US Labeling
Not applicable

2.3. Other Hazards
No additional information available

2.4. Unknown Acute Toxicity (GHS-US):
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oleic acid</td>
<td>(CAS No) 112-80-1</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

3.2. Mixtures
Not applicable

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures
First-aod Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area.
First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes.
First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/Injuries: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/Injuries After Inhalation: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/Injuries After Skin Contact: Not irritating to skin.
Symptoms/Injuries After Eye Contact: Dust from this product may cause minor eye irritation.
Symptoms/Injuries After Ingestion: May cause nausea, vomiting, and diarrhea.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If medical advice is needed, have product container or label at hand.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Carbon dioxide, dry chemical, foam, water spray, fog.

Unsuitable Extinguishing Media: Do not use water jet. Use of heavy stream of water may spread fire.

5.2. 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: Stable at ambient temperature and under normal conditions of use.

5.3. Advice for Firefighters
Firefighting Instructions: Exercise caution when fighting any chemical fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Handle in accordance with good industrial hygiene and safety practice.

6.1.1. For Non-emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

6.1.2. For Emergency Responders
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area.

6.2. Environmental Precautions
Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up
For Containment: Absorb and/or contain spill with inert material, then place in suitable container.
Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Additional Hazards When Processed: Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry.
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 again when leaving work. Do no eat, drink or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
Incompatible Products: Strong oxidizers.
Storage Temperature: In bulk, store at about 5-10°C above melting point or at ambient temperature.
Storage Area: Temperature higher than necessary degrades quality at rates dependent on time and temperature of exposure.
Special Rules on Packaging: Stainless steel preferred for storage.

7.3. Specific End Use(s) See section 1.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

8.2. Exposure Controls
Appropriate Engineering Controls : Ensure all national/local regulations are observed.

Hand Protection : Rubber gloves.
Eye Protection : Chemical goggles or safety glasses.
Respiratory Protection : If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.
Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties
Physical State : Liquid
Appearance : Light yellow. Turns dark red on exposure to air.
Odor : Characteristic.
Odor Threshold : No data available
pH : No data available
Relative Evaporation Rate (butylacetate=1) : No data available
Melting Point : 7 - 11 °C (44.6-51.8°F)
Freezing Point : No data available
Boiling Point : ~ 356 °C (689°F)
Flash Point : ~ 189 °C (372.2°F) Closed Cup; ICSC 1005
Auto-ignition Temperature : 363 °C (685.4°F)
Decomposition Temperature : No data available
Flammability (solid, gas) : No data available
Vapor Pressure : 0.99 mm Hg @ 165°C; ~5.46 x 10^-7 mmHg (HSDB) @ 25 °C
Relative Vapor Density at 20 °C : 9.74
Relative Density : ~ 0.895 @25°C
Specific Gravity : Not available
Solubility : Water: Insoluble @ 20°C
Ethanol: Soluble
Ether: Soluble
Organic solvent:Soluble
Log Pow : No data available
Log Kow : No data available
Viscosity, Kinematic : No data available
Viscosity, Dynamic : No data available
Explosive Properties : No data available
Oxidizing Properties : No data available
Explosive Limits : Not applicable
 SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Stable at ambient temperature and under normal conditions of use.
10.2 Chemical Stability: Stable under normal temperature and pressure.
10.3 Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4 Conditions to Avoid: Avoid ignition sources. Direct sunlight. Extremely high or low temperatures.
10.5 Incompatible Materials: Strong oxidizers.
10.6 Hazardous Decomposition Products: Carbon oxides (CO, CO2).

 SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oleic acid (112-80-1)</td>
<td></td>
</tr>
<tr>
<td>ATE (Oral)</td>
<td>25000.000 mg/kg</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/Injuries After Skin Contact: Not irritating to skin.
Symptoms/Injuries After Eye Contact: Dust from this product may cause minor eye irritation.
Symptoms/Injuries After Ingestion: May cause nausea, vomiting, and diarrhea.

 SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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</thead>
<tbody>
<tr>
<td>Oleic acid (112-80-1)</td>
<td></td>
</tr>
<tr>
<td>LC50 Fish 1</td>
<td>205 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability

<table>
<thead>
<tr>
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<th>Persistence and Degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oleic Acid (112-80-1)</td>
<td>Readily biodegradable in water.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative Potential

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</tr>
</thead>
<tbody>
<tr>
<td>Oleic Acid (112-80-1)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

 SECTION 13: DISPOSAL CONSIDERATIONS

13.1. 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 IMDG/IATA/DOT
14.1. UN Number  Not applicable
14.2. UN Proper Shipping Name  Not regulated for transport.
14.3. Additional Information
Other information  : No supplementary information available.
Transport by Sea  Not regulated for transport.
Air Transport  Not regulated for transport.

SECTION 15: REGULATORY INFORMATION
15.1 US Federal Regulations
Oleic acid (112-80-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations
Oleic Acid(112-80-1)
State or local regulations  The product and/or its components does not appear on any state Right to Know lists.

Oleic acid (112-80-1)
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

SECTION 16: OTHER INFORMATION
The data herein are based on our current knowledge and believed to be reliable. Acme-Hardesty Co., provides this information without any representation or warranty, expressed or implied, regarding its accuracy or correctness.

Users must make their own determination that handling, storage, use and disposal of the product in the anticipated manner is safe and appropriate. Because these actions of the user are out of our control, and may be beyond our knowledge, we do not assume responsibility and expressly disclaim liability for loss, damage, expense or any other claim arising out of or in any way connected with the handling, storage, use or disposal of the product or container.

SDS US (GHS HazCom) - US Only