SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Oleic Acid, Lab Grade

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25451A

Recommended uses of the product and restrictions on use:

Manufacturer Details:
   AquaPhoenix Scientific, Inc
   9 Barnhart Drive, Hanover, PA 17331
   (717) 632-1291

Supplier Details:
   Fisher Science Education
   6771 Silver Crest Road, Nazareth, PA 18064
   (724)517-1954

Emergency telephone number:
   Fisher Science Education
   Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Irritant

Skin irrit. 2.

Signal word: Warning

Hazard statements:
   Causes skin irritation.

Precautionary statements:
   Wash ... thoroughly after handling.
   Wear protective gloves/protective clothing/eye protection/face protection.
   IF ON SKIN: Wash with soap and water.
   Specific treatment (see ... on this label).
   If skin irritation occurs: Get medical advice/attention.
   Take off contaminated clothing and wash before reuse.

Other Non-GHS Classification:

WHMIS
D2B
NFPA/HMIS
SECTION 3: Composition/information on ingredients

Ingredients:

<table>
<thead>
<tr>
<th>CAS 112-80-1</th>
<th>Oleic acid</th>
<th>&gt;97 %</th>
</tr>
</thead>
</table>

Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:
Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

After skin contact:
Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:
Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:
Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:
Irritation. Nausea. Headache. Shortness of breath. Prolonged or repeated skin contact may cause defatting and dermatitis.

Indication of any immediate medical attention and special treatment needed:
If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:
If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:
Combustion products may include carbon oxides or other toxic vapors.

**Advice for firefighters:**

- **Protective equipment:** None
- **Additional information (precautions):** Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

**Environmental precautions:**

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Should not be released into the environment.

**Methods and material for containment and cleaning up:**

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor.

**Reference to other sections:** None

**SECTION 7: Handling and storage**

**Precautions for safe handling:**

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas.

**Conditions for safe storage, including any incompatibilities:**

Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Store with like hazards. Absorbs oxygen from the air and will darken upon exposure.

**SECTION 8: Exposure controls/personal protection**

**Control Parameters:**

No applicable occupational exposure limits.

**Appropriate Engineering controls:**

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

**Respiratory protection:**

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.
Protection of skin: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection: Safety glasses with side shields or goggles.

General hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state, color)</td>
<td>Colorless to pale red liquid.</td>
</tr>
<tr>
<td>Explosion limit lower:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Explosion limit upper:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Odor:</td>
<td>Lardlike</td>
</tr>
<tr>
<td>Vapor pressure at 20°C:</td>
<td>1 mm Hg @ 177 °C</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>9.7</td>
</tr>
<tr>
<td>pH-value:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Relative density:</td>
<td>0.895</td>
</tr>
<tr>
<td>Melting/Freezing point:</td>
<td>13.4 °C</td>
</tr>
<tr>
<td>Solubilities:</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>360 °C</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash point (closed cup):</td>
<td>184°C</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Negligible</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flammability (solid, gaseous):</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>a. Kinematic: Not Determined</td>
</tr>
<tr>
<td></td>
<td>b. Dynamic: Not Determined</td>
</tr>
<tr>
<td>Density at 20°C:</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

Reactivity: None

Chemical stability: No decomposition if used and stored according to specifications. Darkens on exposure to air. On exposure to air, acquires rancid odor.

Possible hazardous reactions: None

Conditions to avoid: Store away from oxidizing agents, strong acids or bases. High temperatures, incompatible materials, light, exposure to air, excess heat.


Hazardous decomposition products: Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

Acute Toxicity: Oral:
Chronic Toxicity: No additional information.
Corrosion Irritation: No additional information.
Sensitization: No additional information.
Numerical Measures: No additional information.
Carcinogenicity: No additional information.
Mutagenicity: No additional information.
Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity:
Aquatic Tox.: LC50 - Pimephales promelas (fathead minnow) - 205 mg/l - 96 h
Persistence and degradability:
Readily degradable in the environment.
Bioaccumulative potential: No additional information.
Mobility in soil:
Aqueous solution has high mobility in soil.
Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:
Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA
Not Dangerous Goods

Limited Quantity Exception:
None

Bulk:
RQ (if applicable): None
Proper shipping Name: Not Dangerous Goods.
Hazard Class: None
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Not Dangerous Goods.
Hazard Class: None
Marine Pollutant (if applicable): No additional information.
Comments: None
SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):
  Acute

SARA Section 313 (Specific toxic chemical listings):
  None of the ingredients are listed.

RCRA (hazardous waste code):
  None of the ingredients are listed.

TSCA (Toxic Substances Control Act):
  All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):
  None of the ingredients are listed.

Proposition 65 (California):

  Chemicals known to cause cancer:
    None of the ingredients are listed.

  Chemicals known to cause reproductive toxicity for females:
    None of the ingredients are listed.

  Chemicals known to cause reproductive toxicity for males:
    None of the ingredients are listed.

  Chemicals known to cause developmental toxicity:
    None of the ingredients are listed.

Canada

  Canadian Domestic Substances List (DSL):
    All ingredients are listed.

  Canadian NPRI Ingredient Disclosure list (limit 0.1%):
    None of the ingredients are listed.

  Canadian NPRI Ingredient Disclosure list (limit 1%):
    None of the ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note, The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None
Abbreviations and Acronyms:

PNEC Predicted No-Effect Concentration (REACH).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Effective date: 12.25.2014
Last updated: 06.17.2015