

## SAFETY DATA SHEET

Preparation Date: 10/23/2015

Revision Date: 10/23/2015

Revision Number: G1

### 1. IDENTIFICATION

#### Product identifier

**Product code:** L1106  
**Product Name:** LINOLEIC ACID, HIGH PURITY

#### Other means of identification

**Synonyms:** Leinoleic acid  
9,12-Linoleic acid  
cis,cis-9,12-Octadecadienoic acid  
cis-9,cis-12-Octadecadienoic acid  
9,12-Octadecadienoic acid  
Telfairic acid

**CAS #:** 60-33-3  
**RTECS #** RF9990000  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** Vitamin. Coatings. Paints. Emulsifiers.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

#### Label elements

Not classified

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Components               | CAS-No. | Weight % | Trade Secret |
|--------------------------|---------|----------|--------------|
| Linoleic Acid<br>60-33-3 | 60-33-3 | 100      | *            |

**4. FIRST AID MEASURES****First aid measures****General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

**Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

**Eye Contact:**

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

**Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

**Most important symptoms and effects, both acute and delayed****Symptoms**

Health injuries are not known or expected under normal use. May cause eye/skin irritation.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician:**

Treat symptomatically

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

**5. FIRE-FIGHTING MEASURES****Extinguishing Media****Suitable Extinguishing Media:**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

**Unsuitable Extinguishing Media:**

No information available.

**Specific hazards arising from the chemical****Hazardous Combustion Products:**

Carbon oxides

**Specific hazards:**

May be combustible at high temperatures  
May be ignited by heat, sparks or flames

## Special Protective Actions for Firefighters

**Specific Methods:** No information available.

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth).

**Methods for cleaning up** Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep refrigerated. Store at 2-8 deg. C. Store away from incompatible materials.

#### **Incompatible Materials:**

Oxidizing agents. Reducing agents. Bases.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **National occupational exposure limits**

##### **United States**

| Components               | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|--------------------------|------|-------|-------|------------|
| Linoleic Acid<br>60-33-3 | None | None  | None  | None       |

##### **Canada**

| Components | Alberta | British Columbia | Ontario | Quebec |
|------------|---------|------------------|---------|--------|
|------------|---------|------------------|---------|--------|

|                          |      |      |      |      |
|--------------------------|------|------|------|------|
| Linoleic Acid<br>60-33-3 | None | None | None | None |
|--------------------------|------|------|------|------|

### Australia and Mexico

| Components               | Australia | Mexico |
|--------------------------|-----------|--------|
| Linoleic Acid<br>60-33-3 | None      | None   |

### Appropriate engineering controls

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

- Eye protection:** Goggles. or. Safety glasses with side-shields.
- Skin and body protection:** Chemical resistant apron. Gloves. Long sleeved clothing.
- Respiratory protection:** Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |  |   |
|---|--|---|
| <b>Physical state:</b><br>Liquid.                               | <b>Appearance:</b><br>Oily.  | <b>Color:</b><br>Colorless. Straw-colored.  |
| <b>Odor:</b><br>No information available                        | <b>Taste</b><br>No information available   | <b>Molecular/Formula weight:</b><br>280.46  |
| <b>Formula:</b><br>C18-H32-O2                                   | <b>Flammability:</b><br>No information available   | <b>Flashpoint (°C/°F):</b><br>>110 °C/>230 °F   |
| <b>Flash point (°C):</b><br>>110                                | <b>Flash Point Tested according to:</b><br>Not available   | <b>Autoignition Temperature (°C/°F):</b><br>No information available  |
| <b>Lower Explosion Limit (%):</b><br>No information available   | <b>Upper Explosion Limit (%):</b><br>No information available  | <b>pH:</b><br>No information available  |
| <b>Melting point/range(°C/°F):</b><br>-12 to -5 °C/10.4-23 °F   | <b>Boiling point/range(°C/°F):</b><br>229-230 °C/444.2-446 F @ 16 mm Hg<br>202 °C/395.6 °F @ 1.4 mm Hg | <b>Decomposition temperature(°C/°F):</b><br>No information available  |
| <b>Bulk density:</b><br>No information available                | <b>Density (g/cm3):</b><br>0.9022-0.91 @20 °C  | <b>Specific gravity:</b><br>No information available  |
| <b>Vapor pressure @ 20°C (kPa):</b><br>No information available | <b>Evaporation rate:</b><br>No information available   | <b>Vapor density:</b><br>No information available   |
| <b>VOC content (g/L):</b><br>No information available           | <b>Odor threshold (ppm):</b><br>No information available   | <b>Partition coefficient (n-octanol/water):</b><br>7.05   |
| <b>Viscosity:</b><br>No information available                   | <b>Miscibility:</b><br>Miscible with Dimethylformamide<br>Miscible with fat solvents                   | <b>Solubility:</b><br>Freely soluble in Ether<br>Soluble in absolute alcohol<br>Very soluble in Acetone<br>Solubility in Acetone: 4.10 g/100 g @ -50 °C; 1.20 g/100 g @ -60 °C; .35 g/100 g @ -70 °C<br>Very soluble in Benzene<br>Very soluble in Ethanol<br>Very soluble in Ether<br>Practically insoluble in water<br>Solubility in Water: 1.59 mg/L @ 25 °C |

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents, reducing agents, and bases

### Chemical stability

**Stability:** Stable under recommended storage conditions

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Incompatible materials.

**Incompatible Materials:** Oxidizing agents. Reducing agents. Bases.

**Hazardous decomposition products:** No information available

### Other Information

**Corrosivity:** No information available

**Product code:** L1106

**Product name:** LINOLEIC ACID, HIGH PURITY

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**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Ingestion.

### Acute Toxicity

### **Component Information**

*Linoleic Acid - 60-33-3*

**LD50/oral/rat** = No information available  
**LD50/oral/mouse** = > 50 g/kg Oral LD50 Mouse  
**LD50/dermal/rat** = No information available  
**LD50/dermal/rabbit** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = No information available

### **Product Information**

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = >50000mg/kg

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available

### Symptoms

**Skin Contact:** May cause skin irritation. It may cause mild skin irritation.

**Eye Contact:** May cause eye irritation. May cause slight or mild eye irritation.

**Inhalation** May cause respiratory tract irritation.  
**Ingestion** Health injuries are not known or expected under normal use.

**Aspiration hazard** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** No information available

**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic

| Components    | IARC       | ACGIH - Carcinogens | NTP        | OSHA HCS - Carcinogens | Australia - Prohibited Carcinogenic Substances | Australia - Notifiable Carcinogenic Substances |
|---------------|------------|---------------------|------------|------------------------|--|--|
| Linoleic Acid | Not listed | Not listed          | Not listed | Not listed             | Not listed                                     | Not listed                                     |

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Target Organs:** No information available

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility:** No information available

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

| Components    | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|---------------|------------------------|------------------------|------------------------|------------------------|
| Linoleic Acid | None                   | None                   | None                   | None                   |

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** None  
**ERG No:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available

### TDG (Canada)

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

### ADR

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

### IMO / IMDG

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant:** No information available  
**MFAG:** No information available  
**Maximum Quantity:** No information available

### RID

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Classification Code:** No information available  
**Description:** No information available



## 14. TRANSPORT INFORMATION

### ICAO

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

### IATA

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

| Components           | U.S. TSCA | KOREA KECL       | Philippines (PICCS) | Japan ENCS      | CHINA   | Australia (AICS) | EINECS-No.        |
|----------------------|-----------|------------------|---------------------|-----------------|---------|------------------|-------------------|
| <i>Linoleic Acid</i> | Present   | Present KE-26285 | Present             | Present (2)-609 | Present | Present          | Present 200-470-9 |

### U.S. Regulations

#### *Linoleic Acid*

**FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1065

**FDA - 21 CFR - Total Food Additives** 184.1065

#### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

##### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

##### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components           | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|----------------------|------------|------------------------|----------------------------|-------------------------------|
| <i>Linoleic Acid</i> | Not Listed | Not Listed             | Not Listed                 | Not Listed                    |

### CERCLA/SARA

| Components           | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting <i>de minimis</i> |
|----------------------|---|---|--|---------------------------------|---|
| <i>Linoleic Acid</i> | None  | None  | None   | None                            | None                                      |

### U.S. TSCA

| Components           | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|----------------------|---|--|
| <i>Linoleic Acid</i> | Not Applicable  | Not Applicable                         |

### Canada

**WHMIS hazard class:**

Non-controlled

**Linoleic Acid**

Uncontrolled product according to WHMIS classification criteria

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

| Components    | WHMIS Ingredient Disclosure List - |
|---------------|------------------------------------|
| Linoleic Acid | 1 %                                |

**Inventory**

| Components    | Canada (DSL) | Canada (NDSL) |
|---------------|--------------|---------------|
| Linoleic Acid | Present      | Not Listed    |

| Components    | CEPA Schedule I - Toxic Substances | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
|---------------|------------------------------------|---|
| Linoleic Acid | Not listed                         | Not listed  |

**EU Classification****R-phrase(s)**

not determined (not applicable)

**S -phrase(s)**

none

| Components    | Classification | Concentration Limits: | Safety Phrases |
|---------------|----------------|-----------------------|----------------|
| Linoleic Acid |                | No information        |                |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

None.

**16. OTHER INFORMATION**

## 16. OTHER INFORMATION

**Preparation Date:** 10/23/2015  
**Revision Date:** 10/23/2015  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**