Vitamin E
(+/-)-alpha-tocopherol; all-rac-alpha-Tocopherol; 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-(9CI); Ephanyl; 5,7,8-Trimethyltocol; 6-Chromanol, 2,5,7,8-tetramethyl-2-(4,8,12-trimethyldecy)-DL-alpha-Tocopherol
C29H50O2
Not available.

Vitamin E: ORAL (LD50): Acute: >4000 mg/kg [Rat]. >4000 mg/kg [Mouse].

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name/Trade Name: Vitamin E
Catalog Number(s): YY1203, VI135, T1154
CAS#: 10191-41-0
RTECS: GA8746000
TSCA: TSCA 8(b) inventory: Vitamin E
CI#: Not available.

Manufacturer: SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Commercial Name(s): Not available.
Synonym: (+/-)-alpha-tocopherol; all-rac-alpha-Tocopherol; 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-(9CI); Ephanyl; 5,7,8-Trimethyltocol; 6-Chromanol, 2,5,7,8-tetramethyl-2-(4,8,12-trimethyldecy)-

Chemical Name: DL-alpha-Tocopherol
Chemical Family: Not available.
Chemical Formula: C29H50O2
Supplier: SPECTRUM LABORATORY PRODUCTS INC.
14422 S. SAN PEDRO STREET
GARDENA, CA 90248

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Vitamin E</td>
<td>10191-41-0</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Exposure Limits

In case of emergency: CHEMTREC (24hr) 800-424-9300

Call (310) 516-8000

Section 3. Hazards Identification

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

Continued on Next Page
### Section 4. First Aid Measures

<table>
<thead>
<tr>
<th>Eye Contact</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.</td>
</tr>
<tr>
<td>Serious Skin Contact</td>
<td>Not available.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.</td>
</tr>
<tr>
<td>Serious Inhalation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>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.</td>
</tr>
<tr>
<td>Serious Ingestion</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flammability of the Product</th>
<th>May be combustible at high temperature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Ignition Temperature</td>
<td>340°C (644°F)</td>
</tr>
<tr>
<td>Flash Points</td>
<td>CLOSED CUP: 240°C (464°F).</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Not available.</td>
</tr>
<tr>
<td>Products of Combustion</td>
<td>These products are carbon oxides (CO, CO2).</td>
</tr>
<tr>
<td>Fire Hazards in Presence of Various Substances</td>
<td>Slightly flammable to flammable in presence of heat.</td>
</tr>
<tr>
<td>Explosion Hazards in Presence of Various Substances</td>
<td>Risks of explosion of the product in presence of mechanical impact: Not available.</td>
</tr>
<tr>
<td></td>
<td>Risks of explosion of the product in presence of static discharge: Not available.</td>
</tr>
<tr>
<td>Fire Fighting Media and Instructions</td>
<td>SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.</td>
</tr>
<tr>
<td>Special Remarks on Fire Hazards</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Explosion Hazards</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 6. Accidental Release Measures

<table>
<thead>
<tr>
<th>Small Spill</th>
<th>Absorb with an inert material and put the spilled material in an appropriate waste disposal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Spill</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Section 7. Handling and Storage

<table>
<thead>
<tr>
<th>Precautions</th>
<th>Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, metals, alkalis.</th>
</tr>
</thead>
</table>
Section 8. 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**
Safety glasses. Lab coat. Gloves (impervious).

**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.

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Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical state and appearance</th>
<th>Liquid. (Oily liquid. Viscous liquid.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>430.69 g/mole</td>
</tr>
<tr>
<td>pH (1% soln/water)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>2.5°C (36.5°F) - 3.5°C.</td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.947-0.955 (Water = 1)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless.</td>
</tr>
<tr>
<td>Taste</td>
<td>Tasteless.</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow. (Light.)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in diethyl ether, acetone.</td>
</tr>
<tr>
<td>Soluble in cold water</td>
<td>Insoluble in cold water.</td>
</tr>
<tr>
<td>Soluble in ethanol, oils, fats</td>
<td></td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity Data

**Stability**
The product is stable.

**Instability Temperature**
Not available.

**Conditions of Instability**
Excess heat, light, air, incompatible materials.

**Incompatibility with various substances**
Reactive with oxidizing agents, metals, alkalis.

**Corrosivity**
Non-corrosive in presence of glass.

**Special Remarks on Reactivity**
Unstable to air and light, particularly when alkaline media. Tocopherols deteriorate slowly on exposure to air and UV light. Darkens on exposure to UV light. Tocopherols are stable to heat in the absence of oxygen, to strong acids, and to visible light. They are unstable to UV light, alkalis and, oxidation. Also incompatible with iron, silver, metal salts, oxidizing agents.

**Special Remarks on Corrosivity**
Not available.

**Polymerization**
Will not occur.

Continued on Next Page
**Section 11. Toxicological Information**

### Routes of Entry
Absorbed through skin. Eye contact.

### Toxicity to Animals
Acute oral toxicity (LD50): >4000 mg/kg [Mouse].

### Chronic Effects on Humans
Not available.

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

### Special Remarks on Toxicity to Animals
Not available.

### Special Remarks on Chronic Effects on Humans
Vitamin E is excreted into human milk. Vitamin E has not been associated with affecting genetic material or adverse reproductive effects in humans. However, when Vitamin E was given to mice in large doses, it was associated with growth retardation of the fetus and an increase in cleft palate. Furthermore, it did affect the genetical material of lab rats when doses of 2500 ug/kg were given to them intraperitoneally.

### Special Remarks on other Toxic Effects on Humans
Acute Potential Health Effects:
- Skin: May cause minor skin irritation (contact dermatitis).
- Eyes: May cause eye irritation.
- Inhalation: May cause respiratory tract irritation if inhaled.
- Ingestion: Vitamin E is an essential nutrient. This fat-soluble vitamin has been used in large doses as an antioxidant. It may cause digestive tract irritation with nausea, vomiting, diarrhea. May also cause fatigue and weakness.

Chronic Potential Health Effects: no information.

**Section 12. Ecological Information**

### Ecotoxicity
Ecotoxicity in water (LC50): >10 mg/l 96 hours [Fish (Trout)]. >100 mg/l 48 hours [Daphnia (daphnia)]. >100 mg/l 72 hours [Algae (Algae)].

### 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 Remarks on the Products of Biodegradation
Not available.

**Section 13. Disposal Considerations**

### Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transport Information**

### DOT Classification
Not a DOT controlled material (United States).

### Identification
Not applicable.

### Special Provisions for Transport
Not applicable.

### DOT (Pictograms)

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*Continued on Next Page*
### Federal and State Regulations

- **TSCA 8(b) inventory:** Vitamin E

### Other Classifications

| WHMIS (Canada) | Not controlled under WHMIS (Canada). |
| DSCL (EEC) | Not available. Not available. |

### HMIS (U.S.A.)

- **Health Hazard:** 1
- **Fire Hazard:** 1
- **Reactivity:** 0
- **Personal Protection:** B

### WHMIS (Canada) (Pictograms)

- [Health Hazard Pictogram]
- [Flammability Pictogram]
- [Reactivity Pictogram]
- [Specific Hazard Pictogram]

### DSCL (Europe) (Pictograms)

### TDG (Canada) (Pictograms)

### ADR (Europe) (Pictograms)

### Protective Equipment

- **Gloves (impervious).**
- **Lab coat.**
- **Not applicable.**
- **Safety glasses.**

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*Continued on Next Page*
# Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>V3140</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Not available.</td>
</tr>
</tbody>
</table>


CALL (310) 516-8000

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. 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 MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.