### Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>Capsaicin, Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
</tr>
<tr>
<td>Catalog Number(s)</td>
<td>C1306, C1414, C1869</td>
</tr>
<tr>
<td>CAS#</td>
<td>404-86-4</td>
</tr>
<tr>
<td>RTECS</td>
<td>RA8530000</td>
</tr>
<tr>
<td>TSCA</td>
<td>TSCA 8(b) inventory: Capsaicin, Natural</td>
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<tr>
<td>CI#</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synonym</td>
<td>(E)-8-Methyl-N-vanillyl-6-nonenamide; trans-8-Methyl-N-vanillyl-6-nonenamide; 6-Nonenamide, 8-methyl-N-vanillyl-(E)-(8Cl); E-Capsaicin; Capsaicin, natural Capsaicine; trans-N-((4-Hydroxy-3-methoxyphenyl)methyl)-8-methyl-6-nonenamide</td>
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<tr>
<td>Chemical Name</td>
<td>6-Nonenamide, N-((4-Hydroxy-3-methoxyphenyl)methyl)-8-methyl-(E)-</td>
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<tr>
<td>Chemical Family</td>
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<tr>
<td>Chemical Formula</td>
<td>C18-H27-N-O3</td>
</tr>
<tr>
<td>Supplier</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
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</tbody>
</table>

### 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>
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</thead>
<tbody>
<tr>
<td>1) Capsaicin, Natural</td>
<td>404-86-4</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
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</tbody>
</table>

**Toxicological Data on Ingredients**

- **ORAL (LD₅₀):** Acute: 47.2-118.8 mg/kg [Mouse (CAS no. 404-86-4)]. 148.1-161.2 mg/kg [Rat].
- **DERMAL (LD₅₀):** Acute: >512 mg/kg [Mouse].
Section 3. Hazards Identification

| Potential Acute Health Effects | Hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant), of ingestion, of inhalation (lung irritant, lung sensitizer). Severe over-exposure can result in death. |
| Potential Chronic Health Effects | CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. |

Section 4. First Aid Measures

| Eye Contact | 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 immediately. |
| Skin Contact | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention. |
| Serious Skin Contact | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Serious Inhalation | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention. |
| Ingestion | If swallowed, 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 immediately. |
| Serious Ingestion | Not available. |

Section 5. Fire and Explosion Data

| Flammability of the Product | May be combustible at high temperature. |
| Auto-Ignition Temperature | Not available. |
| Flash Points | CLOSED CUP: 112.78°C (235°F). |
| Flammable Limits | Not available. |
| Products of Combustion | These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...). |
| Explosion Hazards in Presence of Various Substances | Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks. |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet. |
| Special Remarks on Fire Hazards | As with most organic solids, fire is possible at elevated temperatures |
| Special Remarks on Explosion Hazards | Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |

Continued on Next Page
Section 6. Accidental Release Measures

Small Spill
Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill
Poisonous solid.
Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dilute if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 8°C (46.4°F). Refrigerate

Section 8. Exposure Controls/Personal Protection

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance
Solid. (Powdered solid. Crystalline powder.)

Molecular Weight
305.41 g/mole

pH (1% soln/water)
Not applicable.

Boiling Point
210°C (410°F) - 220°C @ 0.01 mm Hg

Melting Point
65°C (149°F)

Critical Temperature
Not available.

Specific Gravity
Not available.

Vapor Pressure
Not applicable.

Vapor Density
Not available.

Volutility
Not available.

Odor Threshold
Not available.

Water/Oil Dist. Coeff.
The product is more soluble in oil; log(oil/water) = 3

Ionicity (in Water)
Not available.

Dispersion Properties
See solubility in water, diethyl ether.

Solubility
Easily soluble in diethyl ether.
Insoluble in cold water.
Freely soluble in benzene, alcohol, chloroform.
Slightly soluble in carbon disulfide, and in concentrated hydrochloric acid.

Continued on Next Page
### Section 10. Stability and Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>The product is stable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Excess heat, dust generation, incompatible materials</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#### Special Remarks on Reactivity
Not available.

#### Special Remarks on Corrosivity
Not available.

#### Polymerization
Will not occur.

### Section 11. Toxicological Information

#### Routes of Entry
Inhalation, Ingestion.

#### Toxicity to Animals
- Acute oral toxicity (LD50): 47.2 - 118.8 mg/kg [Rat].
- Acute dermal toxicity (LD50): >512 mg/kg [Mouse].

#### Chronic Effects on Humans
**MUTAGENIC EFFECTS:** Mutagenic for bacteria and/or yeast.

#### Other Toxic Effects on Humans
Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation (lung irritant, lung sensitizer).

#### Special Remarks on Toxicity to Animals
LD50 [Rat] - Route: Intraperitoneal; Dose: 9500 ug/kg

#### Special Remarks on Chronic Effects on Humans
May affect genetic material (mutagenic)

#### Special Remarks on other Toxic Effects on Humans
**Acute Potential Health Effects:**
- Skin: Causes skin irritation. It may be be absorbed through skin (particularly abraded skin) and activate dermal pain fibers and cause a burning sensation. There is some concern that capsaicin may be potentially neurotoxic, although clinical studies with topical Capsaicin have not shown this to occur. It is thought to capable of elevating the heat pain threshold in treated skin areas.
- Eyes: Causes irritation with redness, pain, lacrimation, tearing, blepharospasm.
- Inhalation: Causes respiratory tract and mucous membrane irritation with coughing, wheezing, burning sensation in nose and throat, laryngitis.
- Ingestion: Harmful if swallowed. Causes gastrointestinal tract irritation with burning sensation in the mouth and throat, headache, nausea, vomiting, watering eyes, and runny nose, shortness of breath. May affect behavior/central nervous system (convulsions, excitement, muscle contraction or spasticity).

**Chronic Potential Health Effects:**
- Ingestion: Prolonged or repeated ingestion may affect metabolism, liver.
- Inhalation: Prolonged or repeated inhalation may cause severe chronic bronchitis.

### Section 12. Ecological Information

#### Ecotoxicity
Not available.

#### 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 products of degradation are less toxic than the product itself.

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*Continued on Next Page*
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
CLASS 6.1: Poisonous material.

Identification
UNNA: 2811: Toxic solid, organic, n.o.s. (capsaicin) PG: III

Special Provisions for Transport
Not available.

DOT (Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
TSCA 8(b) inventory: Capsaicin, Natural

California Proposition 65
This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California Proposition 65
This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. (EINECS No. 206-969-8).
Canada: Listed on Canadian Domestic Substance List (DSL).
China: Not listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Not listed on National Inventory (KECI).
Philippines: Not listed on National Inventory (PICCS).
Australia: Listed on AICS.

Other Classifications

WHMIS (Canada)
CLASS D1B: Material causing immediate and serious toxic effects (TOXIC).
CLASS D2B: Material causing other toxic effects (TOXIC).

DSCL (EEC)
R25: Toxic if swallowed.
R37/38: Irritating to respiratory system and skin.
R41: Risk of serious damage to eyes.
R42/43: May cause sensitization by inhalation and skin contact.

S22: Do not breathe dust.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28: After contact with skin, wash immediately with plenty of water.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.)

Health Hazard
Fire Hazard
Reactivity
Personal Protection

National Fire Protection Association (U.S.A.)

Hazard
Specific hazard

Continued on Next Page
Capsaicin, Natural

Section 16. Other Information

| MSDS Code   | 04260                      |
| References  | Not available.             |
| Other Special Considerations | Not available. |

Validated by Sonia Owen on 10/8/2008.  
Verified by Sonia Owen.  
Printed 10/10/2008.

CALL (310) 516-8000

Notice to Reader

Continued on Next Page
All chemicals may pose unknown hazards and should be used with caution. The 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.