Material Safety Data Sheet
Vanillin

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Vanillin
**Synonyms:** Vanilla; Vanillaldehyde; 4-Hydroxy-m-anisaldehyde; 4-Hydroxy-3-methoxy-benzaldehyde; Lioxin; Methyl-protocatechualdehyde; p-Vanill

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-33-5</td>
<td>Vanillin</td>
<td>100</td>
<td>204-465-2</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: very slightly yellow solid.
**Caution!** May be harmful if swallowed. May cause eye and skin irritation. May cause digestive tract irritation. Light sensitive. Moisture sensitive.
**Target Organs:** None.

**Potential Health Effects**

**Eye:** Dust may cause mechanical irritation. Low hazard for normal industrial handling.
**Skin:** Dust may cause mechanical irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Low hazard for usual industrial handling.
**Ingestion:** May cause irritation of the digestive tract.
**Inhalation:** No hazard expected in normal industrial use. Dust is irritating to the respiratory tract.
**Chronic:** Not available. Prolonged or repeated contact may result in "vanillism", an allergic

Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
**Skin:** Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.
**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Treat symptomatically and supportively. Get medical aid if irritation or symptoms occur.
**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
**Notes to Physician:** Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures
General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use agent most appropriate to extinguish fire.

Flash Point: 147 deg C (296.60 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Store protected from light.

Storage: Store in a cool, dry place. Store protected from moisture. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanillin</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

Personal Protective Equipment

Eyes: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: very slightly yellow

Odor: vanilla-like

pH: Not available.

Vapor Pressure: 1 mm Hg @ 107 deg C

Vapor Density: Not available.

Evaporation Rate: Not applicable.

Viscosity: Not applicable.

Boiling Point: 285 deg C

Freezing/Melting Point: 81-83 deg C

Decomposition Temperature: Not applicable.
**Solubility:** Slightly soluble in water.

**Specific Gravity/Density:** 1.05

**Molecular Formula:** C8H8O3

**Molecular Weight:** 152.0542

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### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, light, moisture.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong bases, light, air, strong reducing agents, moisture, bromine, perchloric acid, potassium t-butoxide, t-chlorobenzene and sodium hydroxide, formic acid and thallium nitrate.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

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### Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 121-33-5: YW5775000

**LD50/LC50:**

**CAS#** 121-33-5:
- Oral, mouse: LD50 = 3925 mg/kg;
- Oral, mouse: LD50 = 1480 mg/kg;
- Oral, rat: LD50 = 1580 mg/kg;
- Skin, rabbit: LD50 = >5010 mg/kg;

**Carcinogenicity:**

**CAS#** 121-33-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.

**Teratogenicity:** No data available.

**Reproductive Effects:** No data available.

**Mutagenicity:** Experimental mutagen in human lymphocyte cells.

**Neurotoxicity:** No data available.

**Other Studies:**

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### Section 12 - Ecological Information

No information available.

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### Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.

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### Section 14 - Transport Information
IATA

Shipping Name: Not regulated as a hazardous material
Hazard Class: 
UN Number: 
Packing Group: 

Section 15 - Regulatory Information

Hazard Symbols: Not available.
Risk Phrases: 
Safety Phrases: 

Section 16 - Additional Information

MSDS Creation Date: 2/10/1999
Revision #2 Date: 3/18/2003

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