Material Safety Data Sheet
8-Hydroxyquinoline

Section 1 - Chemical Product and Company Identification

**MSDS Name:** 8-Hydroxyquinoline  
**Synonyms:** Bioquin; 8-Oxyquinoline; Oxin; Oxine; Oxybenzopyridine; Hydroxybenzopyridine; Phenopyridine; 8-Quinol; 8-Quinolinol.

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>148-24-3</td>
<td>8-Hydroxyquinoline</td>
<td>&gt;99</td>
<td>205-711-1</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: pale yellow solid.  
**Warning!** Causes eye, skin, and respiratory tract irritation. May be harmful if inhaled. May be harmful if swallowed. Material is light sensitive and may discolor on exposure to light.  
**Target Organs:** Respiratory system, eyes, skin.

**Potential Health Effects**  
**Eye:** Causes eye irritation.  
**Skin:** Causes skin irritation. May be harmful if absorbed through the skin.  
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed. Based on studies with laboratory animals, oral doses may cause anorexia, malaise, confusion, respiratory difficulty, paralysis, and other CNS effects.  
**Inhalation:** Dust is irritating to the respiratory tract. Symptoms may include coughing, labored breathing and chest pain. Other health effects may parallel those from ingestion.  
**Chronic:** Not available. In rats, orally administered 8-hydroxyquinoline produced deposition of iron in many tissues. This effect was increased by increasing the amount of available iron in the diet.

Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.
Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

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

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not breathe dust.

Storage: Store in a cool place in the original container and protect from sunlight. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. 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>8-Hydroxyquinoline</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>
Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

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Section 9 - Physical and Chemical Properties

**Physical State:** Solid  
**Appearance:** pale yellow  
**Odor:** slight phenolic odor  
**pH:** Not available.  
**Vapor Pressure:** Not available.  
**Vapor Density:** Not available.  
**Evaporation Rate:** Not available.  
**Viscosity:** Not available.  
**Boiling Point:** 267 deg C @ 752 mm Hg  
**Freezing/Melting Point:** 72-74 deg C  
**Decomposition Temperature:** Not available.  
**Solubility:** Almost insoluble in water.  
**Specific Gravity/Density:** Not available.  
**Molecular Formula:** C9H7NO  
**Molecular Weight:** 145.16

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Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Darkens and decomposes on exposure to light.  
**Conditions to Avoid:** Light, dust generation, excess heat.  
**Incompatibilities with Other Materials:** Metals, strong oxidizing agents, acids.  
**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.  
**Hazardous Polymerization:** Will not occur.

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Section 11 - Toxicological Information

**RTECS#:**

**CAS# 148-24-3:** VC4200000

**LD50/LC50:**

CAS# 148-24-3:  
Draize test, rabbit, eye: 100 mg Mild;  
Draize test, rabbit, skin: 500 mg/24H Mild;  
Inhalation, rat: LC50 = >1210 mg/m3/6H;  
Oral, mouse: LD50 = 20 gm/kg;  
Oral, rat: LD50 = 1200 mg/kg;

**Carcinogenicity:**

CAS# 148-24-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
**Epidemiology:** No information available.

**Teratogenicity:** There was no evidence of an increase in birth defects in 21 women treated with 8-hydroxyquinoline during the first 16 weeks of pregnancy.

**Reproductive Effects:** No information found

**Mutagenicity:** See actual entry in RTECS for complete information.

**Neurotoxicity:** No information found

**Other Studies:**

### Section 12 - Ecological Information

**Ecotoxicity:** No data available. EC50 (30 min) Photobacterium phosphoreum: 2.3 mg/L Microtox test.

**Environmental:** No information available.

**Physical:** No information available.

**Other:** No information available.

### Section 13 - Disposal Considerations

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

### Section 14 - Transport Information

<table>
<thead>
<tr>
<th>IATA</th>
<th>Shipping Name:</th>
<th>Hazard Class:</th>
<th>UN Number:</th>
<th>Packing Group:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not regulated as a hazardous material</td>
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</tbody>
</table>

### Section 15 - Regulatory Information

**Hazard Symbols:**

XN

**Risk Phrases:**

- R 22 Harmful if swallowed.
- R 36/37/38 Irritating to eyes, respiratory system and skin.
- R 68 Possible risk of irreversible effects.

**Safety Phrases:**

- S 26 In case of contact with eyes, rinse immediately with plenty of
water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 16 - Additional Information

**MSDS Creation Date:** 3/09/2000  
**Revision #5 Date:** 2/11/2005

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