# MATERIAL SAFETY DATA SHEET

## Chemical Product

Product Name: 8-HYDROXYQUINOLINE (Oxine)
CAS#: 148-24-3
Synonym: 8-Quinolinol, Oxine
Chemical Name: 8-Hydroxyquinoline (Oxine)
Chemical Formula: C9H7NO

## Composition and Information on Ingredients

| Name | S.K.U | % by Weight |
|---|---|---|
| 8-Hydroxyquinoline (Oxine) | GCS-2765 | 100 |

## Hazards Identification

**Potential Acute Health Effects:**
Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant).

**Potential Chronic Health Effects:**
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

## 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 if irritation occurs.

**Skin Contact:**
Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

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

Serious Inhalation: Not available.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

## Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).

**Fire Hazards in Presence of Various Substances:**

Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact:
Not available. Slightly explosive in presence of open flames and sparks.

**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: When heated to decomposition it emits highly toxic fumes.

**Special Remarks on Explosion Hazards:**

Fine dust dispersed in air in sufficient concentrations, and in presence of an ignition source, is a potential dust explosion hazard.

## Accidental Release Measures

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## Handling and Storage

**Precautions:**

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. 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, acids.

**Storage:**

Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light- resistant containers.

## 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.

## Physical and Chemical Properties

Physical state and appearance: Solid. (Solid crystalline powder.)

| | |
|---|---|
| Odor | : Phenolic |
| Taste | : Not available. |
| Molecular Weight | : 145.16 g/mole |
| Color | : White. |
| pH (1% soln/water) | : Not applicable. |
| Boiling Point | : 267°C (512.6°F) |
| Melting Point | : 74°C (165.2°F) |
| Critical Temperature | : Not available. |
| Specific Gravity | : 1.04 (Water = 1) |
| Vapor Pressure | : Not applicable. |
| Vapor Density | : Not available. |
| Volatility | : Not available. |
| Odor Threshold | : Not available. |
| Water/Oil Dist. Coeff. | : Not available. |

| | |
|---|---|
| Ionicity (in Water) | : Not available. |
| Dispersion Properties | : See solubility in water, acetone. |

Solubility: Easily soluble in acetone. Insoluble in cold water, hot water. Freely soluble in alcohol, benzene, chloroform, and aqueous mineral acids. Soluble in acetic, formic, hydrochloric, and sulfuric acids, and in alkalies.

## Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials, excess dust generation, light.

Incompatibility with various substances: Reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Sensitive to light. It darkens when exposed to light.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

## Toxicological Information

Routes of Entry: Inhalation. Ingestion.

### Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR
EXPOSURE. Acute oral toxicity (LD50): 1200 mg/kg [Rat]. Acute toxicity of the dust (LC50): >1210 mg/m3 6 hours [Rat].

### Chronic Effects on Humans:

CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: central nervous system (CNS).

### Other Toxic Effects on Humans:

Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

### Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenic). May cause cancer based on animal data. No human data found.

### Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Inhalation: May be harmful if inhaled. Causes respiratory tract and mucous membrane irritation. Symptoms may include coughing, labored breathing, and chestpain. Other effects may parallel those of ingestion. Ingestion: May harmful if swallowed. May cause gastrointestinal tract irritation with nausea, vomiting and diarrhea. Ingestion of large oral doses may affect behavior/central nervous system (confusion, paralysis), respiration (breathing difficulty), metabolism (anorexia - weight loss or decreased weight gain), and may cause malaise. Chronic Potential Health Effects: Ingestion: Repeated or prolonged ingestion will also have effects similar to those of acute ingestion.

Toxicological Data on Ingredients: 8-Hydroxyquinoline: ORAL (LD50): Acute: 1200 mg/kg [Rat]. 20000 mg/kg [Mouse]. DUST (LC50): Acute: > 1210 mg/m 6 hours [Rat].

## Ecological Information

Ecotoxicity: Not available.
BOD5 and COD: Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. Long term degradation products may arise.
Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation: Not available.

## Disposal Considerations

**Waste Disposal :**

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

## Transformation Information

Land transport (ADR-RID)

General information : Not regulated.

Sea transport (IMDG) [English only]

General information : Not regulated.

Air transport (ICAO-IATA) [English only]

General information : Not regulated.

## Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: 8-Hydroxyquinoline

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

WHMIS (Canada): Not controlled under WHMIS (Canada).
DSCL (EEC): R20/22- Harmful by inhalation and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R40- Possible risks of irreversible effects. S2- Keep out of the reach of children. S24/25- Avoid contact with skin and eyes. S46- If swallowed, seek medical advice immediately and show this container or label.

**HMIS (U.S.A.):**

Health Hazard: 2

**Fire Hazard: 1**

Reactivity: 0

**Personal Protection: E**

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

**Health: 2**

Flammability: 1

**Reactivity: 0**

Specific hazard:

**Protective Equipment:**

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

## Additional Information

References: Not available.

Other Special Considerations: Not available.

# *Disclaimer:*

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