

# Material Safety Data Sheet

## Ninhydrin Monohydrate

ACC# 16500

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Ninhydrin Monohydrate**Catalog Numbers:** S93313, S76794, T349-10**Synonyms:** 1,2,3-Indantrione; 1,2,3-Triketohydrindene; 2,2-Dihydroxy-1,3-indandione; 2,2-Dihydroxy-1H-indene-1,3(2H)-dione; 1H-Indene-1,2,3-trione.**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
485-47-2	Ninhydrin Monohydrate	>95.0	207-618-1

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: slightly yellow crystalline powder.

**Warning!** Causes respiratory tract irritation. Harmful if swallowed. Causes eye and skin irritation. May be harmful if absorbed through skin or if inhaled. Light sensitive.**Target Organs:** Eyes, skin, mucous membranes.**Potential Health Effects****Eye:** Causes eye irritation.**Skin:** Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May be harmful if absorbed through the skin. May cause reddening of the skin.**Ingestion:** Harmful if swallowed. May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.**Inhalation:** The toxicological properties of this substance have not been fully investigated. May be harmful if inhaled. Inhalation of dust causes respiratory tract irritation with cough and sore throat.**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.

**Skin:** In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical aid if symptoms occur. 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. Dusts at sufficient concentrations can form explosive mixtures with air.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**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. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light. Refrigeration has been recommended.

## 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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
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Ninhydrin Monohydrate	none listed	none listed	none listed
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**OSHA Vacated PELs:** Ninhydrin Monohydrate: No OSHA Vacated PELs are listed for this chemical.

**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.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystalline powder

**Appearance:** slightly yellow

**Odor:** characteristic odor

**pH:** Not available.

**Vapor Pressure:** Negligible.

**Vapor Density:** 6.16 (air=1)

**Evaporation Rate:** Not applicable.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 466 deg F (dec)

**Decomposition Temperature:** 466 deg F

**Solubility:** Soluble in water.

**Specific Gravity/Density:** 0.86

**Molecular Formula:** C<sub>9</sub>H<sub>6</sub>O<sub>4</sub>

**Molecular Weight:** 178.14

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. May discolor on exposure to light. Ninhydrin becomes anhydrous with reddening at 257°F, swells at 282°F and decomposes at 466°F. Ninhydrin is sensitive to prolonged exposure to light. UV spectrophotometric stability screening indicates that solutions of this compound in ethanol are stable for at least 24 hours.

**Conditions to Avoid:** High temperatures, light, dust generation.

**Incompatibilities with Other Materials:** Strong oxidizing agents, bases, amines.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 485-47-2: NK5425000

**LD50/LC50:**

Not available.

**Carcinogenicity:**

CAS# 485-47-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found.**Teratogenicity:** No information found.**Reproductive Effects:** No information found.**Neurotoxicity:** No information found.**Mutagenicity:** No information found.**Other Studies:** See actual entry in RTECS for complete information.

<b>Section 12 - Ecological Information</b>
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**Ecotoxicity:** No data available. No information available.**Environmental:** No information available.**Physical:** Log P (octanol-water): 0.67**Other:** No information available.

<b>Section 13 - Disposal Considerations</b>
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Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.**RCRA U-Series:** None listed.

<b>Section 14 - Transport Information</b>
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	US DOT	Canada TDG
<b>Shipping Name:</b>	DOT regulated - small quantity provisions apply (see 49CFR173.4)	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

<b>Section 15 - Regulatory Information</b>
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**US FEDERAL****TSCA**

CAS# 485-47-2 is listed on the TSCA inventory.

**Health & Safety Reporting List**

None of the chemicals are on the Health &amp; Safety Reporting List.

**Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**SARA Codes**

CAS # 485-47-2: acute.

**Section 313** No chemicals are reportable under Section 313.

**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 485-47-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:**

XN

**Risk Phrases:**

R 22 Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

**Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water.

**WGK (Water Danger/Protection)**

CAS# 485-47-2: 2

**Canada - DSL/NDSL**

CAS# 485-47-2 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B, D1B.

**Canadian Ingredient Disclosure List**

**Section 16 - Additional Information**

**MSDS Creation Date:** 9/23/1998

**Revision #3 Date:** 3/18/2003

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