

MSDS# 04360

Section 1 - Chemical Product and Company Identification

MSDS Name: Catechol

Catalog Numbers: AC158980000, AC158980025, AC158980050, AC158981000, AC158985000, P370-500

Synonyms: o-Benzenediol; 1,2-Benzenediol; o-Dihydroxybenzene; 1,2-Dihydroxybenzene; Pyrocatechol; Pyrocatechin;

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 120-80-9
Chemical Name: Catechol
%: 99
EINECS#: 204-427-5

Hazard Symbols: XN



Risk Phrases: 21/22 36/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! May cause allergic skin reaction. Harmful if absorbed through the skin. May cause central nervous system depression. Harmful if swallowed. May cause methemoglobinemia. Causes eye and skin burns. May cause severe respiratory and digestive tract irritation with possible burns. Corrosive to aluminum. Sublimes (goes directly from solid to vapor form) readily at room temperature. Target Organs: Kidneys, central nervous system, lungs, cardiovascular system, red blood cells, skin.

Potential Health Effects

Eye: Causes eye burns. May cause chemical conjunctivitis and corneal damage.

Harmful if absorbed through the skin. Prolonged and/or repeated contact may cause irritation and/or dermatitis.

Skin: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. If absorbed, causes symptoms similar to those of ingestion.

Ingestion: Harmful if swallowed. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause perforation of the digestive tract. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. May cause central nervous system depression. May cause systemic effects.

Inhalation: May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. May cause effects similar to those described for ingestion. Aspiration may lead to pulmonary edema. May cause systemic effects.

Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause

Chronic: methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. Effects may be delayed.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Absorption of this product into the body may cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Moderate degrees of cyanosis need to be treated only by supportive measures: bed rest and oxygen inhalation. For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood. Cleansing of the entire contaminated area of the body is of utmost importance.

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. Use water spray to keep fire-exposed containers cool. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

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

Autoignition Temperature: 477 deg C (890.60 deg F)

Flash Point: 127 deg C (260.60 deg F)

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; 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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes.

Storage: Keep container closed when not in use. Keep from contact with oxidizing materials. Corrosives area. Store in a cool, dry area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Catechol	15 ppm; Skin - potential significant contribution to	15 ppm TWA; 20 mg/m3 TWA	none listed

	overall exposure		
	by the cutaneous		
	route		

OSHA Vacated PELs: Catechol: 5 ppm TWA; 20 mg/m³ TWA

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

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: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: almost white to brown

Odor: phenol-like

pH: Not available

Vapor Pressure: 0.01 mm Hg @ 25 deg C

Vapor Density: 3.8 (air=1)

Evaporation Rate: Negligible.

Viscosity: Not applicable.

Boiling Point: 245 deg C (473.00°F)

Freezing/Melting Point: 103-106 deg C

Decomposition Temperature: Not available

Solubility in water: Soluble

Specific Gravity/Density: 1.344

Molecular Formula: C₆H₆O₂

Molecular Weight: 110.11

Section 10 - Stability and Reactivity

Chemical Stability: Substance undergoes color change upon exposure to light and air. Substance is sublimable, able to go directly from solid to vapor.

Conditions to Avoid: Light, dust generation, excess heat, prolonged exposure to air.

Incompatibilities with Other Materials: Strong oxidizing agents, aluminum.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 120-80-9: UX1050000

RTECS:

CAS# 120-80-9: Oral, mouse: LD50 = 260 mg/kg;

Oral, mouse: LD50 = 100 mg/kg;

LD50/LC50: Oral, rat: LD50 = 260 mg/kg;

Oral, rat: LD50 = 3890 mg/kg;

Skin, rabbit: LD50 = 800 mg/kg;

Skin, rabbit: LD50 = 800 mg/kg;

Carcinogenicity: Catechol - ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans California: carcinogen, initial date 7/15/03 IARC: Group 2B carcinogen

Other: See actual entry in RTECS for complete information. The hazards associated with phenol may be seen in this product.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: TOXIC SOLIDS, ORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: UN2811

Packing Group: III

Canada TDG

Shipping Name: TOXIC SOLID ORGANIC NOS (CATECHOL)

Hazard Class: 6.1

UN Number: UN2811

Packing Group: III

USA RQ: CAS# 120-80-9: 100 lb final RQ; 45.4 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 21/22 Harmful in contact with skin and if swallowed.

R 36/38 Irritating to eyes and skin.

Safety Phrases:

S 22 Do not breathe dust.

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

S 37 Wear suitable gloves.

WGK (Water Danger/Protection)

CAS# 120-80-9: 2

Canada

CAS# 120-80-9 is listed on Canada's DSL List

Canadian WHMIS Classifications: D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 120-80-9 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 120-80-9 is listed on the TSCA

Inventory.

Section 16 - Other Information

MSDS Creation Date: 6/15/1999

Revision #9 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
