

## 1 Identification

### Product identifier

**Product name:** Catechol

**Stock number:** A10164

**CAS Number:**  
120-80-9

**EC number:**  
204-427-5

**Relevant identified uses of the substance or mixture and uses advised against.**

**Identified use:** SU24 Scientific research and development

### Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
Email: tech@alfa.com  
www.alfa.com

**Information Department:** Health, Safety and Environmental Department

#### Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

## 2 Hazard(s) identification

### Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 2 H351 Suspected of causing cancer.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

**Hazards not otherwise classified** No information known.

### Label elements

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

#### Hazard pictograms



GHS05 GHS06 GHS08

### Signal word Danger

#### Hazard statements

H301+H311 Toxic if swallowed or in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

#### Precautionary statements

P201 Obtain special instructions before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P361 Remove/Take off immediately all contaminated clothing.

P310 Immediately call a POISON CENTER/doctor.

P362 Take off contaminated clothing and wash before reuse.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### WHMIS classification

D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



Product name: <b>Catechol</b>	
<div>Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)</div> <div><div><div>HEALTH2</div><div>FIRE1</div><div>REACTIVITY1</div></div><div>Health (acute effects) = 2 Flammability = 1 Physical Hazard = 1</div></div> <div>Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.</div>	
3 Composition/information on ingredients	
<div>Chemical characterization: Substances</div> <div>CAS# Description: 120-80-9 1,2-Dihydroxybenzene</div> <div>Identification number(s): EC number: 204-427-5</div>	
4 First-aid measures	
<div>Description of first aid measures</div> <div>After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.</div> <div>After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.</div> <div>After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.</div> <div>After swallowing Seek medical treatment.</div> <div>Information for doctor Most important symptoms and effects, both acute and delayed Causes skin irritation. Toxic in contact with skin. Toxic if swallowed. Causes serious eye damage. Suspected of causing cancer.</div> <div>Indication of any immediate medical attention and special treatment needed No further relevant information available.</div>	
5 Fire-fighting measures	
<div>Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.</div> <div>Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide</div> <div>Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.</div>	
6 Accidental release measures	
<div>Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation</div> <div>Environmental precautions: Do not allow product to reach sewage system or any water course.</div> <div>Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to section 13.</div> <div>Prevention of secondary hazards: No special measures required.</div> <div>Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.</div>	
7 Handling and storage	
<div>Handling Precautions for safe handling Handle under dry protective gas. Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Prevent formation of dust.</div> <div>Information about protection against explosions and fires: No information known.</div> <div>Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements.</div> <div>Information about storage in one common storage facility: Store away from air. Store in the dark. Store away from oxidizing agents.</div> <div>Further information about storage conditions: Store under dry inert gas. This product is air sensitive. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from exposure to light.</div> <div>Specific end use(s) No further relevant information available.</div>	
8 Exposure controls/personal protection	
<div>Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.</div>	

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USA

**Product name: Catechol**

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**Control parameters**

**Components with limit values that require monitoring at the workplace:**

**120-80-9 1,2-Dihydroxybenzene (100.0%)**

REL (USA) Long-term value: 20 mg/m<sup>3</sup>, 5 ppm

TLV (USA) Long-term value: 23 mg/m<sup>3</sup>, 5 ppm

EL (Canada) Long-term value: 5 ppm

EV (Canada) Long-term value: 22 mg/m<sup>3</sup>, 5 ppm

Long-term value: 22 mg/m<sup>3</sup>, 5 ppm

**Additional information:** No data

**Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

**Breathing equipment:** Use suitable respirator when high concentrations are present.

**Recommended filter device for short term use:**

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

**Material of gloves** Nitrile rubber, NBR

**Eye protection:** Tightly sealed goggles

**Body protection:** Protective work clothing.

**9 Physical and chemical properties**

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:** Powder or flakes

**Odor:** Aromatic

**Odor threshold:** Not determined.

**pH-value:** Not applicable.

**Change in condition**

**Melting point/Melting range:** 104-107 °C (219-225 °F)

**Boiling point/Boiling range:** 245-246 °C (473-475 °F)

**Sublimation temperature / start:** Not determined

**Flash point:** 127 °C (261 °F)

**Flammability (solid, gaseous)** Not determined.

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Auto igniting:** Not determined.

**Danger of explosion:** Not determined.

**Explosion limits:**

**Lower:** 1.9 Vol %

**Upper:** Not determined

**Vapor pressure at 20 °C (68 °F):** 0.2 hPa

**Density at 20 °C (68 °F):** 1.37 g/cm<sup>3</sup> (11.433 lbs/gal)

**Relative density** Not determined.

**Vapor density** Not applicable.

**Evaporation rate** Not applicable.

**Solubility in / Miscibility with**

**Water at 20 °C (68 °F):** 451 g/l

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**dynamic:** Not applicable.

**kinematic:** Not applicable.

**Other information** No further relevant information available.

**10 Stability and reactivity**

**Reactivity** No information known.

**Chemical stability** Stable under recommended storage conditions.

**Thermal decomposition / conditions to be avoided:** Decomposition will not occur if used and stored according to specifications.

**Possibility of hazardous reactions** Reacts with strong oxidizing agents

**Conditions to avoid** No further relevant information available.

**Incompatible materials:**

Air

Oxidizing agents

Light

**Hazardous decomposition products:** Carbon monoxide and carbon dioxide

**11 Toxicological information**

**Information on toxicological effects**

**Acute toxicity:**

Toxic in contact with skin.

Toxic if swallowed.

Danger through skin absorption.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

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USA

**Product name: Catechol**

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**LD/LC50 values that are relevant for classification:**

Oral LD50 260 mg/kg (rat)  
Dermal LD50 800 mg/kg (rabbit)

**Skin irritation or corrosion:** Causes skin irritation.  
**Eye irritation or corrosion:** Causes serious eye damage.  
**Sensitization:** No sensitizing effects known.  
**Germ cell mutagenicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.  
**Carcinogenicity:**  
IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.  
ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans.  
Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.  
**Reproductive toxicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.  
**Specific target organ system toxicity - repeated exposure:** No effects known.  
**Specific target organ system toxicity - single exposure:** No effects known.  
**Aspiration hazard:** No effects known.  
**Subacute to chronic toxicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.  
**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
**Carcinogenic categories**  
**OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

**12 Ecological information**

**Toxicity**  
**Aquatic toxicity:** No further relevant information available.  
**Persistence and degradability** No further relevant information available.  
**Bioaccumulative potential** No further relevant information available.  
**Mobility in soil** No further relevant information available.  
**Additional ecological information:**  
**General notes:**  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Avoid transfer into the environment.  
**Results of PBT and vPvB assessment**  
**PBT:** Not applicable.  
**vPvB:** Not applicable.  
**Other adverse effects** No further relevant information available.



**13 Disposal considerations**

**Waste treatment methods**  
**Recommendation** Consult state, local or national regulations to ensure proper disposal.  
**Uncleaned packagings:**  
**Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

**UN-Number**  
**DOT, IMDG, IATA** UN2811

**UN proper shipping name**  
**DOT** Toxic solids, organic, n.o.s. (Catechol)  
**IMDG, IATA** TOXIC SOLID, ORGANIC, N.O.S. (Catechol)

**Transport hazard class(es)**  
**DOT**  
  
**Class** 6.1 Toxic substances.  
**Label** 6.1  
**Class** 6.1 (T2) Toxic substances  
**Label** 6.1  
**IMDG, IATA**  
  
**Class** 6.1 Toxic substances.  
**Label** 6.1

**Packing group**  
**DOT, IMDG, IATA** III

**Environmental hazards:** Not applicable.

**Special precautions for user** Warning: Toxic substances  
**EMS Number:** F-A,S-A

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**Transport/Additional information:**  
**DOT**  
**Marine Pollutant (DOT):** No  
**UN "Model Regulation":** UN2811, Toxic solids, organic, n.o.s. (Catechol), 6.1, III

**15 Regulatory information**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

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USA

**Product name: Catechol**

**Hazard pictograms**



GHS05 GHS06 GHS08

**Signal word** *Danger*

**Hazard statements**

H301+H311 *Toxic if swallowed or in contact with skin.*  
H315 *Causes skin irritation.*  
H318 *Causes serious eye damage.*  
H341 *Suspected of causing genetic defects.*  
H351 *Suspected of causing cancer.*

**Precautionary statements**

P201 *Obtain special instructions before use.*  
P280 *Wear protective gloves/protective clothing/eye protection/face protection.*  
P281 *Use personal protective equipment as required.*  
P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
P361 *Remove/Take off immediately all contaminated clothing.*  
P310 *Immediately call a POISON CENTER/doctor.*  
P362 *Take off contaminated clothing and wash before reuse.*  
P363 *Wash contaminated clothing before reuse.*  
P405 *Store locked up.*  
P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
All components of this product are listed on the Canadian Domestic Substances List (DSL).

**SARA Section 313 (specific toxic chemical listings)**

120-80-9 | 1,2-Dihydroxybenzene

**California Proposition 65**

**Prop 65 - Chemicals known to cause cancer**

120-80-9 | 1,2-Dihydroxybenzene

**Prop 65 - Developmental toxicity** *Substance is not listed.*

**Prop 65 - Developmental toxicity, female** *Substance is not listed.*

**Prop 65 - Developmental toxicity, male** *Substance is not listed.*

**Information about limitation of use:** *For use only by technically qualified individuals.*

**Other regulations, limitations and prohibitive regulations**

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.** *Substance is not listed.*

**The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.**

*Substance is not listed.*

**Annex XIV of the REACH Regulations (requiring Authorisation for use)** *Substance is not listed.*

**Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

**16 Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:** Global Marketing Department

**Date of preparation / last revision** 10/20/2016 / -

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
vPvB: very Persistent and very Bioaccumulative  
ACGIH: American Conference of Governmental Industrial Hygienists (USA)  
OSHA: Occupational Safety and Health Administration (USA)  
NTP: National Toxicology Program (USA)  
IARC: International Agency for Research on Cancer  
EPA: Environmental Protection Agency (USA)  
Acute Tox. 3: Acute toxicity, Hazard Category 3  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Muta. 2: Germ cell mutagenicity, Hazard Category 2  
Carc. 2: Carcinogenicity, Hazard Category 2