

## Chemical Safety Data Sheet MSDS / SDS

## 3,4,5-trihydroxybenzoic acid SDS

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: 3,4,5-trihydroxybenzoic acid

CAS: 149-91-7

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

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Not classified.

**GHS label elements, including precautionary statements**

Signal word                      No signal word

**Hazard statement(s)**

none

**Precautionary statement(s)****Prevention**

none

**Response**

none

**Storage**

none

**Disposal**

none

**Other hazards which do not result in classification**

no data available

**SECTION 3: Composition/information on ingredients****Substance**

Chemical name:                      3,4,5-trihydroxybenzoic acid

Common names and  
synonyms:                              3,4,5-trihydroxybenzoic acid

CAS number:                            149-91-7

EC number:                              205-749-9

Concentration:                         100%

## SECTION 4: First aid measures

### Description of necessary first-aid measures

#### If inhaled

Fresh air, rest.

#### Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Give one or two glasses of water to drink. Rest.

### Most important symptoms/effects, acute and delayed

Inhalation of dust may irritate nose and throat. Contact with eyes or skin causes irritation. (USCG, 1999)

### Indication of immediate medical attention and special treatment needed, if necessary

For immediate first aid - Ensure that adequate decontamination has been carried out. If victim is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask, device or pocket mask as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep victim quiet and maintain normal body temperature. Obtain medical attention. Organic acids and related compounds

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Combustible. Extinguish with water, dry chemicals, foam, or carbon dioxide.

### Specific hazards arising from the chemical

Flash point data for this chemical are not available. It is probably combustible. (NTP, 1992)

### **Special protective actions for fire-fighters**

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### **Environmental precautions**

Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### **Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### **Conditions for safe storage, including any incompatibilities**

Dry. Keep in the dark. PROTECT FROM LIGHT.

## **SECTION 8: Exposure controls/personal protection**

### **Control parameters**

### **Occupational Exposure limit values**

no data available

#### **Biological limit values**

no data available

#### **Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

#### **Individual protection measures, such as personal protective equipment (PPE)**

##### **Eye/face protection**

Wear safety goggles.

##### **Skin protection**

Protective gloves.

##### **Respiratory protection**

Use local exhaust or breathing protection.

##### **Thermal hazards**

no data available

### **SECTION 9: Physical and chemical properties and safety characteristics**

Physical state: Solid. Solid: particulate/powder.

Colour: White.

Odour: no data available

Melting point/freezing point: 251 °C (dec.)

Boiling point or initial boiling point and boiling range: 501 °C.

Flammability:	Combustible.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	271 °C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	Sparingly soluble (NTP, 1992)
Partition coefficient n-octanol/water:	log Pow = 0.7.
Vapour pressure:	0 mm Hg. Temperature:25 °C.
Density and/or relative density:	1.694. Temperature:6 °C.
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

Sparingly water soluble (NTP, 1992)

### Chemical stability

no data available

### **Possibility of hazardous reactions**

Phenols, such as GALLIC ACID, do not behave as organic alcohols, as one might guess from the presence of a hydroxyl (-OH) group in their structure. Instead, they react as weak organic acids. Phenols and cresols are much weaker as acids than common carboxylic acids (phenol has  $pK_a = 9.88$ ). These materials are incompatible with strong reducing substances such as hydrides, nitrides, alkali metals, and sulfides. Flammable gas (H<sub>2</sub>) is often generated, and the heat of the reaction may ignite the gas. Heat is also generated by the acid-base reaction between phenols and bases. Such heating may initiate polymerization of the organic compound. Phenols are sulfonated very readily (for example, by concentrated sulfuric acid at room temperature). The reactions generate heat. Phenols are also nitrated very rapidly, even by dilute nitric acid.

### **Conditions to avoid**

no data available

### **Incompatible materials**

no data available

### **Hazardous decomposition products**

Thermal decomposition products include carbon dioxide and carbon monoxide. Organic acids and related compounds

## **SECTION 11: Toxicological information**

### **Acute toxicity**

Oral: LD<sub>50</sub> - rabbit - 5 000 mg/kg bw.

Inhalation: no data available

Dermal: no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

See Notes.

**STOT-repeated exposure**

See Notes.

**Aspiration hazard**

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 19.1 mg/L - 48 h.

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**



**AEROBIC:** An aerobic biodegradation study of gallic acid, based on BOD measurements, using a sewage inoculum at 20 deg C and an unknown gallic acid concentration, indicated 0.08 percent BODT, over a period of 5 days(1). An aerobic biodegradation study of gallic acid, based on COD measurements, using an activated sludge inoculum of 100 mg/l and an initial pyrogalllic acid concentration of 200 ppm, indicated 90.5 percent COD removal over a period of 5 days at pH=7.2 and 20 deg C(2). An aerobic biodegradation study of gallic acid, based on BOD measurements, using an acclimated sewage inoculum at and an unknown gallic acid concentration, indicated 0 percent BODT, over a period of 5 days(3). The carbon dioxide evolution from pasture soil (pH=6.7) and arable sandy soil (pH=6.2) was studied after addition of gallic acid to the soil and an incubation period of 300 hours at 13 deg c and 20 deg C(4). The decomposition of gallic acid, reflected as carbon dioxide production, became exponential within 10 hours(4).  
**ANAEROBIC:** Under both aerobic and anaerobic conditions, gallic acid is mineralized to methane and carbon dioxide in the presence of certain Rhodospirillaceae(5).

### **Bioaccumulative potential**

An estimated BCF value of 2 was calculated for gallic acid(SRC), using an experimental log Kow of 0.70(1,SRC) and a recommended regression-derived equation(2). According to a classification scheme(3), this BCF value suggests that bioconcentration in aquatic organisms is low(SRC).

### **Mobility in soil**

The Koc of gallic acid is estimated as approximately 57(SRC), using a measured log Kow of 0.70(1) and a regression-derived equation(2,SRC). According to a recommended classification scheme(3), this estimated Koc value suggests that gallic acid is expected to have high mobility in soil(SRC).

### **Other adverse effects**

no data available

## **SECTION 13: Disposal considerations**

### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas

scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### Special precautions for user

no data available

### Transport in bulk according to IMO instruments

no data available

### **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

### **SECTION 16: Other information**

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### **References**

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### **Other Information**

Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any