

# 3,4,5-TRIHYDROXYBENZOIC ACID HYDRATE

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## 1. Product Identification

**Synonyms:** Gallic acid, monohydrate  
**CAS No.:** 5995-86-8 (Monohydrate)  
**Molecular Weight:** 188.14  
**Chemical Formula:**  $C_6H_2(OH)_3COOH \cdot H_2O$   
**Product Codes:** CHEM-275

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Gallic Acid	149-91-7	100%	Yes

## 3. Hazards Identification

### Emergency Overview

**CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.**

### SAF-T-DATA<sup>(tm)</sup> Ratings

Health Rating: 1 - Slight

Flammability Rating: 1 - Slight

Reactivity Rating: 2 - Moderate

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

### Potential Health Effects

There is insufficient data in the published literature to perform a complete hazard evaluation for this product. Special precautions must be used in storage, use and handling. Protective equipment should be chosen using professional judgment.

### Inhalation:

May cause irritation to respiratory tract resulting in coughing and sneezing.

### Ingestion:

Low systemic toxicity. Large amounts may cause some gastrointestinal discomfort, nausea or diarrhea.

**Skin Contact:**

May cause irritation to the skin with redness or minor inflammation on moist skin.

**Eye Contact:**

May cause eye irritation due to possible temporary abrasiveness. Can cause redness, tearing and possibly some pain.

**Chronic Exposure:**

No information found.

**Aggravation of Pre-existing Conditions:**

No adverse health effects expected.

## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:**

Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

**Skin Contact:**

Wash exposed area with soap and water. Get medical advice if irritation develops.

**Eye Contact:**

Wash eyes with plenty of water for at least 15 minutes. Call a physician.

## 5. Fire Fighting Measures

**Fire:**

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

**Explosion:**

Not considered to be an explosion hazard.

**Fire Extinguishing Media:**

Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## 6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Protect from light. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

None established.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear protective gloves and clean body-covering clothing.

### **Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

### **Appearance:**

Fine crystals, white yellowish-white or pale, fawn-colored.

### **Odor:**

Odorless.

### **Solubility:**

1.1g/100ml water @ 20°C (68°F) (anhydrous).

### **Density:**

1.7 (anhydrous)

### **pH:**

No information found.

### **% Volatiles by volume @ 21°C (70°F):**

1

### **Boiling Point:**

Not applicable.

### **Melting Point:**

250°C (482°F)

### **Vapor Density (Air=1):**

No information found.

### **Vapor Pressure (mm Hg):**

No information found.

### **Evaporation Rate (BuAc=1):**

No information found.

## 10. Stability and Reactivity

### Stability:

Stable under ordinary conditions of use and storage.

### Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

### Hazardous Polymerization:

Will not occur.

### Incompatibilities:

Ferric salts, ammonia, strong oxidizing agents, alkalis, nitrous ether, lead acetate, silver salts, chlorates, permanganate..

### Conditions to Avoid:

No information found.

## 11. Toxicological Information

For Anhydrous form: Oral rat LD50: 5g/kg. Investigated as a mutagen, reproductive effector.

Ingredient	\Cancer Lists\ —NTP Carcinogen—		IARC Category
	Known	Anticipated	
Gallic Acid (149-91-7)	No	No	None

## 12. Ecological Information

### Environmental Fate:

No information found.

### Environmental Toxicity:

Harmful to aquatic life in very low concentrations.

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

Not regulated.

## 15. Regulatory Information

Ingredient	--- \Chemical Inventory Status - Part 1\ ---			
	TSCA	EC	Japan	Australia
Gallic Acid (149-91-7)	Yes	Yes	Yes	Yes

----- \Chemical Inventory Status - Part 2\ -----				
--Canada--				
Ingredient	Korea	DSL	NDSL	Phil.
Gallic Acid (149-91-7)	Yes	Yes	No	Yes

----- \Federal, State & International Regulations - Part 1\ -----				
-SARA 302- ---SARA 313---				
Ingredient	RQ	TPQ	List	Chemical Catg.
Gallic Acid (149-91-7)	No	No	No	No

----- \Federal, State & International Regulations - Part 2\ -----				
-RCRA- -TSCA-				
Ingredient	CERCLA	261.33	8(d)	
Gallic Acid (149-91-7)	No	No	No	

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
 SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No  
 Reactivity: No (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

**NFPA Ratings:** Health: 1 Flammability: 0 Reactivity: 0

**Label Hazard Warning:**

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

**Label Precautions:**

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use only with adequate ventilation.

**Label First Aid:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If irritation develops call a physician. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

**Product Use:**

Laboratory Reagent and Consumer Hobby

**Revision Information:**

No Changes.

**Disclaimer:**

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