



## Benzenesulfonic Acid CAS No. 98-11-3

### 1. Product Identification

**Synonyms:** Phenylsulfonic acid; Benzenesulfonic Acid Sesquihydrate

**CAS No.:** 98-11-3

**Molecular Weight:** 185.20

**Chemical Formula:** C<sub>6</sub>H<sub>5</sub>SO<sub>3</sub>H . 1.5H<sub>2</sub>O

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hazardous		
-----	-----	-----
-----		
Benzenesulfonic Acid	98-11-3	95 - 100%
Yes		

### 3. Hazards Identification

#### Emergency Overview

**DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT.  
HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.**

SAF-T-DATA<sup>(tm)</sup> Ratings (Provided here for your convenience)

Health Rating: 3 - Severe

Flammability Rating: 1 - Slight  
Reactivity Rating: 0 - None  
Contact Rating: 4 - Extreme (Corrosive)  
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD;  
PROPER GLOVES  
Storage Color Code: White (Corrosive)

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### **Potential Health Effects**

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#### **Inhalation:**

Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Inhalation may be fatal as a result of spasm inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

#### **Ingestion:**

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhea.

#### **Skin Contact:**

Corrosive. Symptoms of redness, pain, and severe burn can occur. May be absorbed through the skin with possible systemic effects.

#### **Eye Contact:**

Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns.

#### **Chronic Exposure:**

No information found.

#### **Aggravation of Pre-existing Conditions:**

No information found.

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## **4. First Aid Measures**

#### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

#### **Ingestion:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

#### **Skin Contact:**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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## 5. Fire Fighting Measures

**Fire:**

Not considered to be a fire hazard.

**Explosion:**

Not considered to be an explosion hazard.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire.

**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.

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## 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

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## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. 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.

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## 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 the dust or mist is apparent, a half-face dust/mist respirator may be worn. 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 impervious protective clothing, including boots, gloves, lab coat, apron or

coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

**Appearance:**

Dark brown crystalline solid.

**Odor:**

Aromatic odor.

**Solubility:**

Appreciable (> 10%)

**Specific Gravity:**

No information found.

**pH:**

No information found.

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

0

**Boiling Point:**

No information found.

**Melting Point:**

43 - 44C (109 - 111F)

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

No information found.

**Vapor Pressure (mm Hg):**

0

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

0

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## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

Burning may produce carbon monoxide, carbon dioxide, sulfur oxides.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong oxidizers, strong bases.

**Conditions to Avoid:**

Heat, moisture, incompatibles.

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## 11. Toxicological Information

For Benzenesulfonic Acid (anhydrous): LD50 oral rat 890 ul/kg; Irritation Data (Std Draize, rabbit): skin 2 mg/24H severe, and eye 250 ug/24H severe.

-----\Cancer Lists\-----

Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
Benzenesulfonic Acid (98-11-3)	No	No	
None			

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## 12. Ecological Information

### Environmental Fate:

When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material may biodegrade to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material has an estimated bioconcentration factor (BCF) of less than 100. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals.

### Environmental Toxicity:

No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. 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.

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## 14. Transport Information

### Domestic (Land, D.O.T.)

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**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.  
(BENZENESULFONIC ACID)

**Hazard Class:** 8

**UN/NA:** UN3261

Packing Group: II  
**Information reported for product/size: 500G**

**International (Water, I.M.O.)**

**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.  
 (BENZENESULFONIC ACID)

**Hazard Class:** 8

**UN/NA:** UN3261

Packing Group: II

**Information reported for product/size: 500G**

## 15. Regulatory Information

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-----\Chemical Inventory Status - Part 1\-----
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Ingredient                                TSCA  EC    Japan
Australia
-----
Benzenesulfonic Acid (98-11-3)           Yes   Yes   Yes
Yes
  
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-----\Chemical Inventory Status - Part 2\-----
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Ingredient                                Korea  DSL   --Canada--
Phil.                                     NDSL
-----
Benzenesulfonic Acid (98-11-3)           Yes   Yes   No
Yes
  
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-----\Federal, State & International Regulations - Part 1\-----
-----
313-----
Ingredient                                -SARA 302-  -----SARA
Chemical Catg.                            RQ      TPQ     List
-----
Benzenesulfonic Acid (98-11-3)           No     No     No
No
  
```

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-----\Federal, State & International Regulations - Part 2\-----
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TSCA-                                     -RCRA-   -
Ingredient                                CERCLA   261.33  8(d)
-----
Benzenesulfonic Acid (98-11-3)           No     No     No
  
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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.

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## 16. Other Information

**NFPA Ratings:** Health: **3** Flammability: **0** Reactivity: **0**

**Label Hazard Warning:**

DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT.  
HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.

**Label Precautions:**

No SAF-T-DATA Ratings have been developed for this product. Read and follow all warnings, precautions, instructions and other safety and handling information on the label and MSDS.

Do not get in eyes, on skin, or on clothing.

Do not breathe dust.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

**Label First Aid:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No Changes.

**Disclaimer:**

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