TCI AMERICA

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**Corrosive to eyes and skin on contact. Toxic compound, do not ingest or inhale. Avoid all contact with this material. (Inhalation Hazard)**	

Section I. Chemical Product and Company Identification

Chemical Name: **Benzenesulfonic Acid**
Monohydrate

Catalog Number	B0030
Synonym	Phenylsulfonic Acid
Chemical Formula	$C_6H_5SO_3H \cdot H_2O$
CAS Number	26158-00-9

Supplier: TCI America
9211 N. Harborgate St.
Portland OR
1-800-423-8616

In case of Emergency Call: **Chemtrec®**
(800) 424-9300 (U.S.)
(703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Benzenesulfonic Acid Monohydrate	26158-00-9	Min. 98.0 (HPLC,T)	Not available.	Rat LD_{50} (oral) 890 mg/kg Wild bird LD_{50} (oral) 75 mg/kg

Section III. Hazards Identification

Acute Health Effects

Toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested.
Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

Section IV. First Aid Measures

Eye Contact

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. COLD water may be used. Get medical attention immediately.

Skin Contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. COLD water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation

If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.

Ingestion

DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. SEEK IMMEDIATE MEDICAL ATTENTION in case of ingestion of a radioactive material.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.

Combustion Products

These products are toxic carbon oxides (CO, CO_2), sulfur oxides (SO_2, SO_3...).

Fire Hazards

Reactive with strong oxidizers. Vapors may travel to source of ignition and flash back. Closed containers may explode from the heat of a fire. Highly flammable in presence of combustible materials.

Explosion Hazards

Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions

SMALL FIRE: Use DRY chemicals, CO_2, water spray or foam.
LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Consult with local fire authorities before attempting large scale fire-fighting operations.

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Emergency phone number (800) 424-9300

Section VI. Accidental Release Measures

Spill Cleanup Instructions

Corrosive material. Toxic material.
Stop leak if without risk. DO NOT get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. DO NOT touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information

CORROSIVE. TOXIC. Keep container dry. Keep away from heat. Mechanical exhaust required. Keep away from combustible material.. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Avoid contact with skin and eyes.
Always store away from incompatible compounds such as oxidizing agents.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Face shield. Lab coat. Vapor and dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits

Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Light-brown moist solid.	Solubility	Soluble in water, alcohol. Slightly soluble in benzene. Insoluble in ether, carbon disulfide.
Specific Gravity	Not available.		
Molecular Weight	158.18 (Anh.)	Partition Coefficient	Not available.
Boiling Point	Not available.	Vapor Pressure	Not available.
Melting Point	50-51°C	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability

This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability

Avoid excessive heat and light.

Incompatibilities

Reactive with strong oxidising agents.

Section XI. Toxicological Information

RTECS Number

DB4200000

Routes of Exposure

Eye contact. Ingestion. Inhalation. Skin contact.

Toxicity Data

Rat LD_{50} (oral) 890 mg/kg
Wild bird LD_{50} (oral) 75 mg/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
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Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Benzenesulfonic acid's use as a reagent in the manufacture of phenol, resorcinol, and other organic syntheses and as a catalyst could result in its release to the environment through various waste streams. Benzenesulfonic acid is expected to have very high mobility in soil. Volatilization of benzenesulfonic acid is not expected from either moist or dry soils. In water, benzenesulfonic acid is expected to be essentially non-volatile. Adsorption to sediment, bioconcentration, and hydrolysis are not expected to be important fate processes in aquatic systems. Biodegradation of benzenesulfonic acid is likely to occur in both aquatic and soil media provided adequate acclimation by microorganisms occurs. Benzenesulfonic acid will exist in both the vapor and particulate phases in the ambient atmosphere. If released to the atmosphere, it will degrade by reaction with photochemically produced hydroxyl radicals with an estimated half-life of approximately 29 days. Removal of benzenesulfonic acid from the atmosphere can occur though wet and dry deposition(SRC). Exposure to benzenesulfonic acid can occur through dermal contact, inhalation, and ingestion.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state, and local regulations when disposing of this substance.

Section XIV. Transport Information

DOT Classification	CLASS 8: Corrosive solid.
PIN Number	UN2585
Proper Shipping Name	Aryl sulfonic acids, solid.
Packing Group (PG)	III
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This product is **ON** the EPA Toxic Substances Control Act (TSCA) inventory.
WHMIS Classification (Canada)	WHMIS CLASS E: Corrosive solid.
EINECS Number (EEC)	202-638-7
EEC Risk Statements	R34- Causes burns. R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

Version 1.0
Validated on 3/12/2009.
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Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.