



Material Safety Data Sheet

(Para Toluene Sulfonic Acid)

SPARCHEM

159, Ashoka Shopping Center
Mumbai 400 001

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SECTION 1 – PRODUCT AND COMPANY INFORMATION

PRODUCT NAME Para Toluene Sulfonic Acid

SYNONYM 4-Methylbenzenesulfonic acid; Tosic acid; p-TSA; p-Tolylsulfonic acid

FORMULA $C_7H_8O_3S.H_2O$

CAS NUMBER 104-15-4

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT NAME CAS NUMBER PURITY

Para Toluene Sulfonic Acid 104-15-4 100%

SECTION 3- HAZARDS IDENTIFICATION

Emergency Overview

DANGER! CORROSIVE. CAUSES BURNS. HARMFUL IF SWALLOWED OR INHALED.

MATERIAL IS EXTREMELY DESTRUCTIVE TO THE UPPER RESPIRATORY TRACT, EYES AND SKIN.

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 3 - Severe

Flammability Rating: 1 - Slight

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe (Corrosive)

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

Storage Color Code: White (Corrosive)

Potential Health Effects

Information on the human health effects from exposure to this substance is limited.

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:

Extremely destructive to tissues. May be fatal.

Skin Contact:

Extremely destructive to skin. Causes irritation, redness, pain, and burns.

Eye Contact:

Extremely destructive to eyes. Causes irritation, redness, pain, and burns.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

SECTION 4 – FIRST AID MEASURES

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

Ingestion:

DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Skin Contact:

In case of contact, wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

Eye Contact:

Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

SECTION 5 – FIRE FIGHTING MEASURES

Fire:

Flash point: 184C (363F) CC

Autoignition temperature: 350C (662F)

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. May react strongly with water.

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.

SECTION 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. Keep unnecessary and unprotected personnel from entering hazard area.

Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

SECTION 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. Protect from moisture. 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.

SECTION 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 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.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white crystals.

Odor: Odorless when pure; technical grade has a slight aromatic odor

Solubility: 67g/100mL water, anhydrous.

Density: 1.23-1.24 g/cm³ at 20C (anhydrous)

pH: No information found.

% Volatiles by volume @ 21C (70F): No information found.

Boiling Point: 140C (284F) @ 20mm , anhydrous

Melting Point: 103 - 106C (217 - 223F)

Vapor Density (Air=1): 6.0

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.

SECTION 10 – STABILITY AND REACTIVITY DATA

Stability:

Stable under ordinary conditions of use and storage. A strong acid when dissolved when dissolved in water, the solution is corrosive and reacts violently with bases.

Hazardous Decomposition Products:

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

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Solution is a strong acid. Incompatible with sulfuric acid, caustics, ammonia, amines, amides, organic anhydrides, isocyanates, vinyl acetate, alkylene oxide and epichlorohydrin. Attacks metals in the presence of moisture and produces hydrogen gas.

Conditions to Avoid:

No information found.

SECTION 11 – TOXICOLOGICAL INFORMATION

For anhydrous p-Toluenesulfonic acid: Oral rat LD50: 2480 mg/kg.

Cancer Lists

NTP Carcinogen

Ingredient Known Anticipated IARC Category

Toluene Sulfonic Acid (104-15-4) No No None

SECTION 12 – ECOLOGICAL INFORMATION

Environmental Fate:

When released into the soil, this material is expected to leach into groundwater. When released into water, this material may biodegrade to a moderate extent. When released into water, this material is not expected to evaporate significantly. When released into the air, this material is expected to be readily removed from the atmosphere by wet deposition. This material is not expected to significantly bioaccumulate.

Environmental Toxicity:

No information found.

SECTION 13 – DISPOSAL CONSIDERATION

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.

SECTION 14 - TRANSPORTATION DATA

Domestic (Land, D.O.T.)

Proper Shipping Name: ALKYL SULFONIC ACID, SOLID (WITH NOT MORE THAN 5% FREE SULFURIC ACID)

Hazard Class: 8

UN/NA: UN2585

Packing Group: III

Information reported for product/size: 500G

International (Water, I.M.O.)

Proper Shipping Name: ALKYLSULPHONIC ACID, SOLID (WITH NOT MORE THAN 5% FREE SULPHURIC ACID)

Hazard Class: 8

UN/NA: UN2585

Packing Group: III

Information reported for product/size: 500G

International (Air, I.C.A.O.)

Proper Shipping Name: ALKYLSULPHONIC ACID, SOLID (WITH NOT MORE THAN 5% FREE SULPHURIC ACID)

Hazard Class: 8

UN/NA: UN2585

Packing Group: III

Information reported for product/size: 500G

SECTION 15 – REGULATORY INFORMATION

Chemical Inventory Status - Part 1

Ingredient TSC AEC Japan Australia

Toluene Sulfonic Acid (104-15-4) Yes Yes Yes Yes

Chemical Inventory Status - Part 2

-----Canada-----

Ingredient Korea DSL NDSL Phil.

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Toluene Sulfonic Acid (104-15-4) Yes Yes No Yes

Federal, State & International Regulations - Part 1

-----SARA 302-----SARA 313-----

Ingredient RQ TPQ List Chemical Catg.

Toluene Sulfonic Acid (104-15-4) No No No No

Federal, State & International Regulations - Part 2

-RCRA- -TSCAIngredient

CERCLA 261.33 8(d)

Toluene Sulfonic Acid (104-15-4) 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: 2X

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.

SECTION 16 – OTHER INFORMATION

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is 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.

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