

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: p-Toluenesulfonic acid monohydrate

CAS-No.: 6192-52-5

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), H290


Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

|                            |  |
|----------------------------|--|
| Pictogram                  |   |
| Signal word                | Danger   |
| Hazard statement(s)        | H290 May be corrosive to metals.<br>H314 Causes severe skin burns and eye damage.<br>H335 May cause respiratory irritation.  |
| Precautionary statement(s) | P234 Keep only in original container.<br>P260 Do not breathe dust or mist.<br>P264 Wash skin thoroughly after handling.<br>P271 Use only outdoors or in a well-ventilated area.<br>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.<br>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.<br>P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.<br>P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.<br>P363 Wash contaminated clothing before reuse.<br>P390 Absorb spillage to prevent material damage.<br>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.<br>P405 Store locked up.<br>P406 Store in corrosive resistant stainless steel container with a resistant inner liner.<br>P501 Dispose of contents/ container to an approved waste disposal plant. |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Mixtures

Formula:  $C_7H_8O_3S \cdot H_2O$

Molecular weight: 190.22 g/mol

## Hazardous components

| Component                                 | Classification   | Concentration   |
|---|--|-----------------|
| <b>p-Toluensulphonic acid monohydrate</b> |  |                 |
| CAS-No. 6192-52-5<br>EC-No. 203-180-0     | Met. Corr. 1; Skin Corr. 1B; Eye Irrit. 2A; STOT SE 3;<br>H290, H314, H319, H335 | >= 90 -<= 100 % |
| <b>Sulfuric acid</b>                      |  |                 |
| CAS-No. 7664-93-9<br>EC-No. 231-639-5     | Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; H290, H314                              | < 0.5 %         |
| <b>p-Toluensulphonic acid monohydrate</b> |  |                 |
| CAS-No. 6192-52-5<br>EC-No. 203-180-0     | Met. Corr. 1; Skin Corr. 1B; Eye Irrit. 2A; STOT SE 3;<br>H290, H314, H319, H335 | >= 90 -<= 100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

|  |
|--|
| <b>General advice</b>  |
| Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.                                  |
| <b>If inhaled</b>  |
| If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.                            |
| <b>In case of skin contact</b>   |
| Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.                         |
| <b>In case of eye contact</b>  |
| Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital. |
| <b>If swallowed</b>  |
| Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.                |

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.2 Indication of any immediate medical attention and special treatment needed

No data available

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

No data available

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

## 6. ACCIDENTAL RELEASE MEASURES

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

## 6.2 Environmental precautions

Do not let product enter drains.

## 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

| Component     | CAS-No.   | Value | Control parameters    | Basis   |
|---------------|-----------|-------|-----------------------|---|
| Sulfuric acid | 7664-93-9 | TWA   | 0.2 mg/m <sup>3</sup> | USA. ACGIH Threshold Limit Values (TLV)   |
|               |           | TWA   | 1 mg/m <sup>3</sup>   | USA. OSHA -TABLE Z-1 Limits for Air Contaminants -1910.1000                     |
|               |           | TWA   | 1 mg/m <sup>3</sup>   | USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants |

Hazardous components without workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

|                     |  |
|---------------------|--|
| Eye/face protection | Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). |
|---------------------|--|

|                                   |   |
|-----------------------------------|---|
| Skin protection                   | <p>Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.</p> <p>Full contact<br/>Material: Nitrile rubber<br/>Minimum layer thickness: 0.11 mm<br/>Break through time: 480 min<br/>Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)</p> <p>Splash contact<br/>Material: Nitrile rubber<br/>Minimum layer thickness: 0.11 mm<br/>Break through time: 480 min<br/>Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)<br/>data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374</p> <p>If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.</p> |
| Body Protection                   | Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.   |
| Respiratory protection            | Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).   |
| Control of environmental exposure | Do not let product enter drains.  |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Appearance                                   | Form: solid   |
| Odour  | No data available                                       |
| Odour Threshold                              | No data available                                       |
| pH   | No data available                                       |
| Melting point/freezing point                 | Melting point/range: 103 - 106 °C (217 - 223 °F) - lit. |
| Initial boiling point and boiling range      | No data available                                       |
| Flash point                                  | No data available                                       |
| Evaporation rate                             | No data available                                       |
| Flammability (solid, gas)                    | No data available                                       |
| Upper/lower flammability or explosive limits | No data available                                       |
| Vapour pressure                              | No data available                                       |
| Vapour density                               | No data available                                       |
| Relative density                             | No data available                                       |
| Water solubility                             | No data available                                       |
| Partition coefficient: n-octanol/water       | No data available                                       |
| Auto-ignition temperature                    | No data available                                       |
| Decomposition temperature                    | No data available                                       |
| Viscosity                                    | No data available                                       |
| Explosive properties                         | No data available                                       |
| Oxidizing properties                         | No data available                                       |

### 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|  |
|--|
| <b>Acute toxicity</b>  |
| No data available<br>Inhalation: No data available<br>Dermal: No data available<br>No data available   |
| <b>Skin corrosion/irritation</b>   |
| No data available  |
| <b>Serious eye damage/eye irritation</b>   |
| No data available  |
| <b>Respiratory or skin sensitisation</b>   |
| No data available  |
| <b>Germ cell mutagenicity</b>  |
| No data available  |
| <b>Carcinogenicity</b>   |
| IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.<br>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.<br>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| <b>Reproductive toxicity</b>   |
| No data available<br>No data available   |
| <b>Specific target organ toxicity -single exposure</b>   |
| No data available  |
| <b>Specific target organ toxicity -repeated exposure</b>   |
| No data available  |
| <b>Aspiration hazard</b>   |
| No data available  |
| <b>Additional Information</b>  |
| RTECS: Not available<br>To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.<br>Stomach - Irregularities - Based on Human Evidence (Sulfuric acid)<br>Stomach - Irregularities - Based on Human Evidence (Sulfuric acid)  |

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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

No data available

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

| Product  |
|--|
| Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. |
| Contaminated packaging   |
| Dispose of as unused product.  |

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 2585 Class: 8 Packing group: III

Proper shipping name: Aryl sulfonic acids, solid

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

### IMDG

UN number: 2585 Class: 8 Packing group: III EMS-No: F-A, S-B

Proper shipping name: ARYLSULPHONIC ACIDS, SOLID

### IATA

UN number: 2585 Class: 8 Packing group: III

Proper shipping name: Arylsulphonic acids, solid

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## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

| Component     | CAS-No.   | Revision Date |
|---------------|-----------|---------------|
| Sulfuric acid | 7664-93-9 | 2007-07-01    |

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Acute Health Hazard

### Massachusetts Right To Know Components

| Component                          | CAS-No.   | Revision Date |
|------------------------------------|-----------|---------------|
| p-Toluensulphonic acid monohydrate | 6192-52-5 | 1993-04-24    |
| Sulfuric acid                      | 7664-93-9 | 2007-07-01    |

### Pennsylvania Right To Know Components

| Component                          | CAS-No.   | Revision Date |
|------------------------------------|-----------|---------------|
| p-Toluensulphonic acid monohydrate | 6192-52-5 | 1993-04-24    |
| Sulfuric acid                      | 7664-93-9 | 2007-07-01    |

### New Jersey Right To Know Components

| Component                          | CAS-No.   | Revision Date |
|------------------------------------|-----------|---------------|
| p-Toluensulphonic acid monohydrate | 6192-52-5 | 1993-04-24    |
| Sulfuric acid                      | 7664-93-9 | 2007-07-01    |

### California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

| Component     | CAS-No.   | Revision Date |
|---------------|-----------|---------------|
| Sulfuric acid | 7664-93-9 | 2007-09-28    |

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Eye Dam. Serious eye damage

Eye Irrit. Eye irritation

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Met. Corr. Corrosive to metals

Skin Corr. Skin corrosion

STOT SE Specific target organ toxicity - single exposure

### HMIS Rating

Health hazard: 3

Chronic Health Hazard: \*

Flammability: 0

Physical Hazard 0

### NFPA Rating

Health hazard: 3

Fire Hazard: 0

Reactivity Hazard: 0

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