

### Material Safety Data Sheet

#### Toluene sulfonyl chloride, Alpha –

#### **Section 1 - Product and Company Information**

Substance	: alpha Toluene sulfonyl chloride, Benzenemethanesulfonyl chloride, Phenylmethanesulfonyl chloride
Trade Name	: Alpha Toluene sulfonyl chloride.
Chemical Family	: Acid Chloride
Company	: Shiva Pharmachem Ltd. Plot No. 588, Village Luna Taluka Padra, District: Vadodara, Gujarat, India – 391440.
Phone No.	: +91-2662-221021 / 224360
Fax No.	: +91-2662-223314

#### **Section 2 – Hazards Identification**

##### **2.1 Classification of the substances or mixture**

**Classification according to regulations (EC) no 1272 / 2008 (EU GHS/CLP)**

Skin Corrosion, (Category 1B)

**Classification according to EU directives 67/548/EEC or 1999/45/EC**

Causes burn

##### **2.2 Labeling elements**

**Labeling according to EC 1272 / 2008 (CLP)**

**Pictogram**



**Single word**

Danger

**Hazard Elements**

**H314**

Causes severe skin burn and eye damage

**Precautionary statements**

**P280**

Wear protective gloves/protective clothing/eye and face protection

**P305 + P351 + P338**

IF IN EYES: Rinse cautiously for several minutes.

**P310**

Immediately call physician

**According to EU directives 67/548/EEC as amended**

**Hazard symbol**



**R PHRASE (s)**

**R34**

Causes burn

**S PHRASE (s)**

**S26**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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**S36/37/39**

Wear suitable protective clothing, gloves and eye/face protection.

**S45**

In case of accident or you feel unwell, seek medical advice.

### **2.3 Other hazard**

Lachrymator, vesicant.

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## **Section 3 - Composition / Information on Ingredients**

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Product Name	CAS No.	EC No.	Mol. Formula	Mol. Weight.
Toluene sulfonyl chloride, Alpha	1939-99-7	217-717-1	C <sub>7</sub> H <sub>7</sub> ClO <sub>2</sub> S	190.65 g/mol

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## **Section 4 – First Aid Measures**

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### **General information:**

Immediately remove contaminated clothing.

### **INHALATION:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

### **SKIN CONTACT:**

Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.

### **EYE CONTACT:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

### **SWALLOWING:**

Seek immediate medical advice.

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## **Section 5 – Fire Fighting Measures**

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### **Suitable extinguishing agents**

Use water spray, alcohol resistant foam, CO<sub>2</sub>, sand, dry chemical powder.

### **Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide, Hydrogen chloride (HCl) and Sulfur oxides (SO<sub>x</sub>)

Protective equipment:

Wear self-contained breathing apparatus for firefighting if necessary.

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#### Section 6 – Accidental Release Measures

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**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation

**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents

**Additional information:**

See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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#### Section 7 - Handling and Storage

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**Handling**

Information for safe handling:

Handle under dry protective gas. Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**

Keep ignition sources away.

**Storage****Requirements to be met by storerooms and receptacles:**

No special requirements.

**Information about storage in one common storage facility:**

Store away from water/moisture, keep away from oxidizing agents and strong bases.

**Further information about storage conditions:**

Store under dry inert gas. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers.

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### **Section 8 - Exposure Controls / Personal Protection**

#### **Additional information about design of technical systems:**

Handle in accordance with good industrial hygiene and safety practice. Wash hand before break and at the end of work day. Handle the product in chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

#### **Personal protective equipments**

Eye/face protection : Face shield and safety goggles.

Skin protection : Hand gloves.

Breathing equipment : Use suitable respirator when high concentrations are present.

Body protection : Protective work clothing.

#### **General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

### **Section 9 - Physical and Chemical Properties**

Physical Appearance	: Crystalline
Appearance Color	: White to pale yellow light brown
pH	: Acidic
BP/BP Range	: 120°C 10 mmHg
MP/MP Range	: 92-93°C
Flash Point	: Data not available
Ignition temperature	: Data not available
Decomposition temperature	: Data not available
Danger of explosion	: Data not available
Explosion limits	: Data not available
Lower	: Data not available
Upper	: Data not available
Vapor pressure	: Data not available
Refractive index	: 1.624 – 1.626
Solubility / Miscibility	: Soluble in toluene
Water	: Does not react with water

### **Section 10 - Stability and Reactivity**

#### **Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

#### **Materials to be avoided:**

Strong Oxidizing agents, strong base.

**Dangerous reactions** Data not available

**Dangerous products of decomposition:** Carbon monoxide and carbon dioxide Hydrogen chloride (HCl) Sulfur oxides (SOx)

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#### Section 11 - Toxicological Information

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**Acute toxicity:**

**Primary irritant effect:**

**Skin:** Corrosive effect on skin and mucous membranes. Irritant to skin and mucous membranes.

**Eye :** Strong corrosive effect. Irritating effect.

**Sensitization:** No sensitizing effects known.

**Carcinogenicity:** Not identified as probable, possible or confirm human carcinogen by IARC.

**Sub acute to chronic toxicity:**

Corrosive materials are acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause damage to the mouth, throat and esophagus. May cause skin burns or irritation depending on the severity of the exposure.

**Additional toxicological information:**

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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#### Section 12 - Ecological Information

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**General notes:**

Do not allow material to be released to the environment without proper governmental permits.

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#### Section 13 - Disposal Considerations

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**Product:**

**Recommendation:**

Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packaging:**

**Recommendation:**

Disposal must be made according to official regulations.

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#### Section 14 - Transport Information

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**DOT regulations:**

**Hazard class** : 8

**Identification number** : UN 3096

**Packing group** : II

**Proper shipping name (technical name):** CORROSIVE SOLID, WATER-REACTIVE, N.O.S.  
(alpha-Toluenesulfonyl chloride)

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<b>Label</b>	: 8+4.3
<b>Land transport ADR/RID</b>	: (cross-border)
<b>ADR/RID class</b>	: 8 (C4) Corrosive substances
<b>Danger code (Kemler)</b>	: 80
UN-Number	: 3261
Packaging Group	: II
<b>Description of goods</b>	: 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Toluene sulfonyl chloride,Alpha-)
<b>Maritime transport IMDG:</b>	
IMDG Class	: 8
UN Number	: 3261
Label	: 8
Packaging group	: II
Proper shipping name	: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Toluene sulfonyl chloride,Alpha-)
<b>Air transport ICAO-TI and IATA-DGR:</b>	
ICAO/IATA Class	: 8
UN/ID Number	: 3261
Label	: 8
Packaging Group	: II
Proper shipping name	: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Toluene sulfonyl chloride,Alpha-)

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### Section 15 - Regulatory Information

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#### Product related hazard informations:

**Hazard symbols:** C Corrosive

#### Risk phrases:

34 Causes burns.

#### Safety Phrases:

- 8 keep container dry.
- 20 When using do not eat or drink.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 45 In case of accident or if you feel unwell, seek medical advice immediately.
- 60 This material and its container must be disposed of as hazardous waste.

#### National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

#### Information about limitation of use:

For use only by technically qualified individuals

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#### **Section 16 - Additional Information**

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Shiva Pharmachem Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incident, consequential or exemplary damages, howsoever arising, even if Shiva Pharmachem Ltd has been advised of the possibility of such damages