

Chemical Safety Data Sheet

Section 1 IDENTIFICATION

GHS Product identifier: p-Toluenesulfonyl Isocyanate.

Other means of identification: /

Recommended use of the chemical and restrictions on use: /

Supplier's details:

Emergency phone number:

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Respiratory Sensitizer Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation).

GHS Label elements, including precautionary statements:

Symbol:



Signal word: Danger

Hazard statement(s): Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation

Precautionary statement(s):

Prevention:

Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands [and ...] thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not touch eyes. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...[In case of inadequate ventilation] wear respiratory protection.

Response:

IF ON SKIN: Take off contaminated clothing. And wash it before reuse. Wash with plenty of water/... Specific treatment (see below). If skin irritation occurs: Get medical help. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get emergency medical help immediately. Get medical help if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification: /

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
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p-Toluenesulfonyl Isocyanate	4083-64-1	98.45%
Tosyl chloride	98-59-9	0.52%

Section 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician immediately.

In case of skin contact: Wash off with soap and plenty of running water.

In case of eye contact: Rinse thoroughly with plenty of running water for at least 15 minutes and consult a physician.

If ingestion: Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed: /

Indication of immediate medical attention and special treatment needed, if necessary: /

Section 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Use foam, dry powder, water spray to extinguish.

Special hazards arising from the chemical: This material may burn and decompose at high temperature and fire and release toxic fumes.

Special protective actions for fire-fighters: Firefighters must wear air breathing apparatus, fire-fighting suits and protective gloves to extinguish in the upwind direction. Whenever possible, remove the container from the fire to open space and use spray water to cool unopened containers.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: It is recommended that emergency personnel wear gas masks and anti-poison suits. Do not touch the spill directly.

Environmental precautions: Isolate contaminated areas and restrict access.

Methods and materials for containment and cleaning up: Small amount of leakage: adsorption with sand or other inert materials. Do not allow products to enter restricted areas such as sewers. A large amount of leakage: building a dike or digging a pit to contain. Transfer to a tank truck or special collector with a pump and transport to a waste disposal site for disposal.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: There should be sufficient local exhaust in workplace. Operators should be trained and strictly follow the operating procedures. Operators are advised to wear gas masks, anti-poison suits and rubber gloves. Operators should load and unload lightly during handling to prevent damage to the package. There should be leakage treatment equipment in workplace. There may be harmful residues in empty containers.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well-ventilated warehouse. Keep away from fire and heat. Protect from direct sunlight. The package should be sealed and not exposed to moisture. It should be stored separately from oxidants, flammable materials, acids, etc., and should not be mixed. The storage area should be provided with suitable materials to contain spills.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters: /

Appropriate engineering controls: Close strictly and provide sufficient local exhaust.

Individual protection measures

Eye/face protection: Wear a protective mask.

Skin protection: Wear normal protective clothing.

Respiratory protection: Air respirators should be worn during emergency rescue or evacuation.

Thermal hazards: /

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Transparent liquid.
Colour	Colorless.
Odour	/
Melting point/freezing point	/
Boiling point or initial boiling point and boiling range	144°C (10 mm Hg)。
Flammability	/
Lower and upper explosion limit/flammability limit	/
Flash point	>95°C。
Auto-ignition temperature	/
Decomposition temperature	/
pH	/
Kinematic viscosity	/
Solubility	Reacts with water。
Partition coefficient: n-octanol/water (log value)	/
Vapour pressure	/
Density and/or relative density	1.29。
Relative vapour density	>1.0。
Particle characteristics	/

Section 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: This material is stable in normal temperature.

Possibility of hazardous reactions: Hazardous polymerisation will not occur..

Conditions to avoid: Spark, static electricity and high temperature.

Incompatible materials: Flammable materials, oxidizers. Segregate from alcohol, water. Avoid strong acids, bases.

Hazardous decomposition products: Oxycarbides, nitrogen oxides (NO_x), sulfur oxides (SO_x).

Section 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Ingestion (swallowing), skin/eye exposure and inhalation.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects:

Ingestion can cause symptoms such as nausea, vomiting and abdominal pain.

Skin contact can cause redness and irritation.

Inhalation can be toxic and cause cough, throat irritation.

Eyes contact can cause redness and irritation.

Chronic health effects: /

Numerical measures of toxicity (such as acute toxicity estimates):

Oral (Rat) LD50: 2600 mg/kg

Inhalation (Rat) LC50: >320 ppm4h

Dermal (Rat) LD50: >2000 mg/kg

Section 12 ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial, where available):

Endpoint	Test Duration (hr)	Species	Value
EC50	72h	Algae or other aquatic plants	25mg/l
EC50	48h	Crustacea	>100mg/l
NOEC(ECx)	72h	Algae or other aquatic plants	10mg/l
LC50	96h	Fish	>45mg/l

Persistence and degradability: Water/Soil: HIGH. Air: HIGH.

Bioaccumulative potential: LOW (LogKOW = 2.3424)

Mobility in soil: LOW (KOC = 882.1)

Other adverse effects: /

Section 13 DISPOSAL CONSIDERATIONS

Disposal methods: Dispose this product by safe burial. Damaged containers are prohibited from being reused and should be buried in the prescribed place.

Section 14 TRANSPORT INFORMATION

UN number: /

UN proper shipping name: /

Transport hazard class(es): /

Packing group, if applicable: /

Environmental hazards: /

Special precautions for user: /

Transport in bulk according to IMO instruments: /

Section 15 REGULATORY INFORMATION

Regulations: This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB 18218-2018, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012, GB/T 15098-2008, GBZ 2.1-2019, GBZ 2.2-2007 as well as the following regulations: Railway Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation.

Section 16 OTHER INFORMATION

References	UN Recommendations on the Transport of Dangerous Goods Model Regulations
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	UN Globally Harmonized System of Classification and Labelling of Chemicals
Form Date	03-Aug-2023

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer/supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.