

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Trifluoromethanesulphonic acid anhydride  
**Synonyms:** Triflic anhydride  
**Company Identification:** PI Chemicals Ltd.  
Building B, 633 E Shan Road, Pudong New Area  
Shanghai 200127, China  
**Telephone Number:** 86-21-58953700  
**Fax Number:** 86-21-58953701

### Section 2 - Product Information

**Catalog Number:** PI-15300  
**CAS Number:** 358-23-6  
**MDL Number:** MFCD00000408  
**EC Number:** 206-616-8  
**Purity:** 98%

### Section 3 - Physical and Chemical Properties

**Form:** Colorless transparent liquid  
**Molecular Formula:**  $C_2F_6O_5S_2$   
**Molecular Weight:** 282.14  
**Freezing/Melting Point:** Not available  
**Boiling Point:** 81 - 83 °C (178 - 181 °F)  
**Flash Point:** Not available  
**Autoignition Temperature:** Not available  
**Vapour pressure:** 11 hPa (8 mmHg) at 20 °C (68 °F)  
**Density:** 1.677 g/mL at 25 °C (77 °F)  
**Decomposition Temperature:** Not available  
**Solubility:** Not available

### Section 4 - Hazards Identification

**Inhalation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin:** Harmful if absorbed through skin. Causes skin burns.  
**Eyes:** Causes eye burns. Causes severe eye burns.  
**Ingestion:** Harmful if swallowed.

## **Section 5 - First Aid Measures**

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

## **Section 6 - Stability and Reactivity**

- Chemical Stability:** Stable under recommended storage conditions.
- Possibility of hazardous reactions:** Reacts violently with water.
- Conditions to avoid:** Exposure to moisture.
- Materials to avoid:** Water, Strong bases, Strong oxidizing agents, acids, Alcohols
- Hazardous Decomposition Products:** Carbon oxides, Sulphur oxides, Hydrogen fluoride

## **Section 7 - Handling and Storage**

- Handling:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
- Storage:** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Never allow product to get in contact with water during storage.  
Moisture sensitive. Store under inert gas.

## **Section 8 - Personal Protection**

- Eyes:** Wear appropriate protective eyeglasses.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## **Section 9 - Fire and Explosion Hazard Data**

- General Information:** As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.
- Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

## **Section 10 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container.

## **Section 11 - Toxicological Information**

**RTECS#:** CAS# 358-23-6: Not available.

**LD50/LC50:** RTECS: Not available.

**Carcinogenicity:** Trifluoromethanesulphonic acid anhydride  
–Not listed as a carcinogen by ACGIH, IARC, NTP, or OSHA.

## **Section 12 - Environmental information**

Not available

## **Section 13 - Disposal Consideration**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

## **Section 14 - Transport Information**

**IATA:** UN number: 3265 Class: 8 Packing group: II.

**IMO:** UN number: 3265 Class: 8 Packing group: II.

**RID/ADR:** UN number: 3265 Class: 8 Packing group: II.

## **Section 15 - Regulatory Information**

**Hazard Symbols:** C

**Indication of Danger:** Corrosive

**Risk Phrases:**

R 14: Reacts violently with water.

R 21/22: Harmful in contact with skin and if swallowed.

R 34: Causes burns.

**Safety Phrases:**

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S 43: In case of fire, use fire-fighting equipment. If water increases the risk add - Never use water.

S 45: In case of accident or if you feel unwell, seek medical advice immediately (show label

where possible)

**WGK (Water Danger/Protection)**

**CAS#358-23-6: 3.**

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

**MSDS Creation Date:** April 6, 2009

**Update:** May 26, 2011

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