

Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: (S)-2-Tetrahydrofuroic acid
Synonyms:
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-31323
CAS Number: 87392-07-2
MDL Number: MFCD00272639
Purity: 98%

Section 3 - Physical and Chemical Properties

Physical state: Clear liquid
Color: Colorless or pale yellow
Molecular Formula: C₅H₈O₃
Molecular Weight: 116.12
Freezing/Melting Point: Undetermined
Boiling Point: 244 - 251 °C (471 - 484 °F) - lit.
Flash Point: 110 °C (230 °F) - closed cup
Autoignition Temperature: Undetermined
Refractive Index (n_D20): Undetermined
Density: 1.2 g/cm³ at 25 °C (77 °F)
Decomposition Temperature: Undetermined
Solubility: Undetermined

Section 4 - Hazards Identification

Eye: Causes eye irritation.
Skin: Causes skin irritation. Harmful if absorbed through the skin.
Ingestion: May be harmful if swallowed.
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Section 5 - First Aid Measures

- Eye:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin:** Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.
- Ingestion:** Get medical aid immediately. Wash mouth out with water.
- Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Section 6 - Stability and Reactivity

- Chemical Stability:** Stable under recommended storage conditions.
- Materials to avoid:** Carbon dioxide (CO₂), Strong oxidizing agents, Acids, Acid anhydrides, Acid chlorides, Strong oxidizing agents.
- Hazardous Decomposition Products:** Carbon oxides.
- Hazardous Polymerization:** Will not occur.

Section 7 - Handling and Storage

- Handling:** Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
- Storage:** Keep container tightly closed in a dry and well-ventilated place.

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# 87392-07-2: Not available.
LD50/LC50: RTECS # Not available.
Carcinogenicity: (S)-2-Tetrahydrofuroic acid -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: III.
IMO: UN-Number: 3265 Class: 8 Packing group: III.
RID/ADR: UN-Number: 3265 Class: 8 Packing group: III.

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Indication of Danger: Corrosive

Risk Phrases:

R 22: Harmful 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 45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

WGK (Water Danger/Protection)

CAS# 87392-07-2: 3

Section 16 - Additional Information

MSDS Creation Date: 27 July, 2008
Update: 3 February, 2012

The above information is believed to be accurate and represents the best knowledge available to us currently. 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 way shall PI Chemicals, be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, even if PI Chemicals has been advised of the possibility of such damages.

For R&D Use Only.