

Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: 4-THP
Synonyms: Tetrahydro-4H-pyran-4-one, 4-Oxotetrahydropyran
Company Identification: PI Chemicals Ltd.
Room 512, Building 1
88 Cailun Road, Zhangjiang Hi-Tech park,
Pudong New Area, Shanghai 201203, China
Telephone Number: 86-21-58953700
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Section 2 - Product Information

Catalog Number: PI-13776
CAS Number: 29943-42-8
MDL Number: MFCD00006581
EC Number: 249-967-2
Purity: 98%

Section 3 - Physical and Chemical Properties

Physical state: Liquid
Color: Clear, colourless
Odor: Characteristic odor
Molecular Formula: C₅H₈O₂
Molecular Weight: 100.12
Freezing/Melting Point: Not available
Boiling Point: 166-166.5 °C(lit.)
Flash Point: 56 deg C (132.80 deg F)
AutoignitionTemperature: Not available
Refractive Index (nD20): n20/D 1.452(lit.)
Density: 1.084 g/mL at 25 °C
DecompositiorTemperature: Not available
Solubility: Miscible with water

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 normal temperatures and pressures.
Materials to avoid: Strong oxidizing agents, strong bases.
Conditions to avoid: Incompatible materials.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Polymerization: Will not occur.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Storage: Store in cool place, Keep container tightly closed in a dry and well-ventilated place. Avoid sources of ignition.

Section 8 - Personal Protection

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 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# 29943-42-8: None listed.

LD50/LC50: RTECS#: None listed.

Carcinogenicity: Tetrahydro-4H-pyran-4-one - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated.

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

ADR/RID: UN 1224 3/PG 3

IMDG: UN 1224 3/PG 3

IATA: UN 1224 3/PG 3

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi, F

Indication of Danger: Irritant

Risk Phrases:

R 22: Harmful if swallowed.

Safety Phrases:

S 24/25: Avoid contact with skin and eyes.

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

WGK (Water Danger/Protection)

CAS#29943-42-8: 3

Canada

CAS#29943-42-8: Not available

US Federal

TSCA

CAS# 29943-42-8 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Additional Information

MSDS Creation Date: March 23, 2009

Update: Original

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.

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