

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

<i>MSDS Name:</i>	Z-Thr(tBu)-OH.DCHA
<i>Synonyms:</i>	N-Z-O-tert-butyl-L-threoninedicyclohexylamine salt
<i>Company Identification:</i>	PI Chemicals Ltd. Building B, 633 E Shan Road, Pudong New Area Shanghai 200127, China
<i>Telephone Number:</i>	86-21-58953700
<i>Fax Number:</i>	86-21-58953701

### Section 2 - Product Information

<i>Catalog Number:</i>	PI-18251
<i>CAS Number:</i>	16966-07-7
<i>MDL Number:</i>	MFCD00077043
<i>EC Number:</i>	241-040-0
<i>Purity:</i>	98.0%

### Section 3 - Physical and Chemical Properties

<i>Physical state:</i>	Powder
<i>Color:</i>	Off white
<i>Molecular Formula:</i>	C <sub>28</sub> H <sub>46</sub> N <sub>2</sub> O <sub>5</sub>
<i>Molecular Weight:</i>	490.68
<i>Freezing/Melting Point:</i>	143 - 147 °C (289 - 297 °F)
<i>Boiling Point:</i>	Undetermined
<i>Flash Point:</i>	Undetermined
<i>Autoignition Temperature:</i>	Undetermined
<i>Refractive Index (n<sub>D</sub>20):</i>	Undetermined
<i>Density:</i>	Undetermined
<i>Decomposition Temperature:</i>	Undetermined
<i>Solubility:</i>	Undetermined

### Section 4 - Hazards Identification

<i>Eye:</i>	Causes eye irritation.
<i>Skin:</i>	Causes skin irritation. Harmful if absorbed through the skin.
<i>Ingestion:</i>	May cause irritation of the digestive tract. Toxic if swallowed.
<i>Inhalation:</i>	May be harmful if inhaled. Cause 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:* Strong oxidizing agents.
- Conditions to Avoid:* Has not been reported.
- Hazardous Decomposition Products:* Carbon oxides, Nitrogen oxides (NOx)
- Hazardous Polymerization:* Has not been reported.

## Section 7 - Handling and Storage

- Handling:* Avoid breathing dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required. Keep away from sources of ignition - No smoking.
- Storage:* Store in a cool, dry and well-ventilated place. Store in a tightly closed container.

## 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, alcohol-resistant foam, dry chemical or carbon dioxide.

## 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# 16966-07-7: Not available

*LD50/LC50:* Not available

*Carcinogenicity:* Z-Thr(tBu)-OH.DCHA - 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:* Not dangerous goods.

*IMO:* Not dangerous goods.

*RID/ADR:* Not dangerous goods.

### ***Section 15 - Regulatory Information***

#### *European/International Regulations*

European Labeling in Accordance with EC Directives

Signal word: Xn

Hazard statement(s)

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

Risk Phrases:

R 22: Harmful if swallowed.

Safety Phrases:

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

S 37/39: Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS#16966-07-7: 3

Canada

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CAS#16966-07-7: Not available

*US Federal*

*TSCA*

CAS# 16966-07-7 is not listed on the TSCA Inventory. It is for research and development use only.

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

*MSDS Creation Date:* May 31, 2008

*Update:* May 10, 2011

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