

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** (R)-3-Pyrrolidinol  
**Synonyms:** (R)-3-Hydroxypyrrolidine  
**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-10148  
**CAS Number:** 2799-21-5  
**MDL Number:** MFCD00145220  
**Purity:** 99%

### Section 3 - Physical and Chemical Properties

**Physical state:** Liquid  
**Color:** Colorless to pale yellow  
**Odor:** Not available  
**Molecular Formula:** C<sub>4</sub>H<sub>9</sub>NO  
**Molecular Weight:** 87.12  
**Freezing/Melting Point:** no data available  
**Boiling Point:** 215 - 216 °C  
**Flash Point:** 113 °C - closed cup  
**Autoignition Temperature:** Not available  
**Refractive Index (n<sub>D</sub>20):** Not available  
**Density:** 1,078 g/mL at 20 °C  
**Decomposition Temperature:** Not available  
**Solubility:** Not available

### 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:** Strong oxidizing agents.
- Hazardous Decomposition Products:** Carbon monoxide, Nitrogen oxides.

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

- Handling:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.
- Storage:** Store at 2-8°C. Store under inert gas. Sensitive to carbon dioxide. Air sensitive. Store in cool place, 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.

## **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***

**Acute toxicity:** No data available

**Irritation and corrosion:** No data available

**Sensitisation:** No data available

**Chronic exposure**

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** May be harmful if swallowed.

### ***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:** Not dangerous goods

**IMDG:** Not dangerous goods

**IATA:** Not dangerous goods

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

**Labelling according to EC Directives**

**Hazard symbols**

**Xi**                      **Irritant**

**R-phrases(s)**

**R36/37/38**            Irritating to eyes, respiratory system and skin.

**S-phrases(s)**

**S26**                      In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**S37/39**                Wear suitable gloves and eye/face protection.

**Caution - substance not yet tested completely.**

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**Section 16 - Additional Information**

**MSDS Creation Date:** March 15, 2008

**Update:** April 29, 2011

*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.*