

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Cis-1,2-Diaminocyclohexane  
**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-33717  
**CAS Number:** 1436-59-5  
**MDL Number:** MFCD00063746  
**Purity:** 97%

### Section 3 - Physical and Chemical Properties

**Physical state:** Clear liquid  
**Color:** Light yellow  
**Molecular Formula:** C<sub>6</sub>H<sub>14</sub>N<sub>2</sub>  
**Molecular Weight:** 114.19  
**Freezing/Melting Point:** Not available  
**Boiling Point:** 92 - 93 °C (198 - 199 °F) at 24 hPa (18 mmHg) - lit.  
**Flash Point:** 70 °C (158 °F) - closed cup  
**Autoignition Temperature:** Not available  
**Refractive Index (nD20):** Not available  
**Density:** 0.952 g/cm<sup>3</sup> at 25 °C (77 °F)  
**Decomposition Temperature:** Not available  
**Solubility:** Not available

### Section 4 - Hazards Identification

**Eye:** Causes eye burns.  
**Skin:** Causes skin burns. Harmful if absorbed through the skin.  
**Ingestion:** Harmful if swallowed.  
**Inhalation:** Harmful if inhaled. Destructive to respiratory tract.

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

<b>If inhaled:</b>	If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.
<b>In case of skin contact:</b>	Wash off with soap and plenty of water.
<b>In case of eye contact:</b>	Flush eyes with water as a precaution.
<b>If swallowed:</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

<b>Chemical Stability:</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid:</b>	Heat, flames and sparks.
<b>Materials to Avoid:</b>	Strong oxidizing agents, acids, Acid chlorides, Acid anhydrides.
<b>Hazardous Decomposition Products:</b>	Carbon oxides, nitrogen oxides (NO <sub>x</sub> ).
<b>Hazardous Polymerization:</b>	Has not been reported.

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

<b>Handling:</b>	Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
<b>Storage:</b>	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**

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

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

<b>General Information:</b>	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.
<b>Extinguishing Media:</b>	Use water spray, dry chemical, carbon dioxide, or appropriate foam.

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

<b>General Information:</b>	Use proper personal protective equipment as indicated in Section 8.
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**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container.

### ***Section 11 - Toxicological Information***

**RTECS#:** CAS# 1436-59-5: Not available.

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

**Carcinogenicity:** Cis-1,2-Diaminocyclohexane -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: 2735 Class: 8 Packing group: II.

**IMO:** UN number: 2735 Class: 8 Packing group: II.

**RID/ADR:** UN number: 2735 Class: 8 Packing group: II.

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

Hazard Symbols: C

Indication of Danger: Corrosive

Risk Phrases:

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)

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

**MSDS Creation Date:** 17 August, 2007

**Update:** 27 June, 2011

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