

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

MSDS Name: (+/-)-Trans-1,2-Diaminocyclohexane
Synonyms: (+/-)-trans-1,2-Cyclohexanediamine
Company Identification: Shanghai PI Chemicals Ltd.
Room 6-306, Building 2
1341 Pudong South Road
Pudong New Area, Shanghai 200212, China
Telephone Number: 86-21-51389368
Fax Number: 86-21-51389367
Emergency Number: 86-21-51389369

Section 2 – Product Information

Catalog Number: PI-31383
CAS #: 1121-22-8
MDL #: MFCD00063747
Purity: 98.0%
EINECS# Unlisted

Section 3 – Physical and Chemical Properties

Physical state: Liquid
Color: Clear colorless to light yellow
Odor: Not available
Molecular Formula: C₆H₁₄N₂
Molecular Weight: 114.19
Freezing / Melting Point: 14-15°C
Boiling Point: 79-81°C (15 mmHg)
Flash Point: 68°C
Autoignition Temperature: Not available
Refractive Index (n_{D20}): 1.4885-1.4905
Density: 0.951
Decomposition Temperature: Not available
Solubility: Soluble in water

Section 4 – Hazards Identification

- Eye:** Causes eye burns.
- Skin:** Causes skin burns. Harmful if absorbed through the skin.
- Ingestion:** May cause burn of the digestive tract. Toxic if swallowed.
- Inhalation:** May be harmful if inhaled. Causes respiratory tract burns.

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 acids.
- Conditions to Avoid:** Incompatible materials.
- Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, nitrogen oxides.
- 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.
- Storage:** Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Corrosives area.

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# 1121-22-8: Unlisted

LD50/LC50: RTECS: Not available

Carcinogenicity: (+/-)-Trans-1,2-Diaminocyclohexane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

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	IMO	RID / ADR
Shipping Name:	TOXIC SOLID, ORGANIC, N.O.S. *	TOXIC SOLID, ORGANIC, N.O.S.	TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class:	8	8	8
UN Number:	2375	2375	2375
Packing Group:	II	II	II

Section 15 – Regulatory Information

European / International Regulations

European Labeling in Accordance with EC Directives

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 Wear suitable protective clothing.

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

WGK (Water Danger/Protection)

CAS#1121-22-8: 3

Canada

CAS#1121-22-8: Not available

US Federal

TSCA

CAS# 1121-22-8 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 – Additional Information

MSDS Creation Date: 2/25/2007

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.