

## SAFETY DATA SHEET

Preparation Date: 11/22/2016

Revision Date: Not Applicable

Revision Number: Not Applicable

### 1. IDENTIFICATION

**Product identifier**

**Product code:** A1572  
**Product Name:** trans-4-Aminocyclohexanol

**Other means of identification**

**Synonyms:** No information available  
**CAS #:** 27489-62-9  
**RTECS #** Not available  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** For manufacturing or laboratory use only.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000.

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300

**Contact Person:** Martin LaBenz (West Coast)

**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

**Label elements**

**Danger**

**Hazard statements**

Causes severe skin burns and eye damage



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/physician*  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %
trans-4-Aminocyclohexanol	27489-62-9	100

**4. FIRST AID MEASURES**

**First aid measures**

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
- Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison

Control Center immediately.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Severe skin and eye irritation or burns. Corrosive to the eyes and may cause severe damage including blindness. Skin contact may result in redness, pain, inflammation, itching, scaling.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray, mist, or foam.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:** Carbon Oxides. Nitrogen Oxides.

**Specific hazards:** May be combustible at high temperatures

**Special Protective Actions for Firefighters**

**Specific Methods:** No information available.

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing dust.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE**

### Precautions for safe handling

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Use only in area provided with appropriate exhaust ventilation. Avoid dust formation. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Do not ingest. Handle in accordance with good industrial hygiene and safety practice. Keep away from heat and sources of ignition.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Store at room temperature in the original container. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Air sensitive. Store in a segregated and approved area. Store away from incompatible materials.

#### **Incompatible Materials:**

Strong oxidizing agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
trans-4-Aminocyclohexanol	27489-62-9	None	None	None	None

##### **Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
trans-4-Aminocyclohexanol	27489-62-9	None	None	None	None

##### **Australia and Mexico**

Components	CAS-No.	Australia	Mexico
trans-4-Aminocyclohexanol	27489-62-9	None	None

### Appropriate engineering controls

#### **Engineering measures to reduce exposure:**

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

#### **Personal Protective Equipment**

**Product code:** A1572

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trans-4-Aminocyclohexanol

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**Eye protection:** Goggles or Face-shield

**Skin and body protection:** Gloves. Long sleeved clothing. Chemical resistant apron.

**Respiratory protection:** Wear respirator with dust filter. or. Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state:</b> Solid	<b>Appearance:</b> Crystalline powder.	<b>Color:</b> White. Pale reddish-yellow.
<b>Odor:</b> No information available.	<b>Taste</b> No information available.	<b>Formula:</b> C6H13NO
<b>Molecular/Formula weight:</b> 115.18	<b>Flammability:</b> No information available	<b>Flashpoint (°C/°F):</b> No information available.
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> 109° - 113°C (228° - 235°F)	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 127°C (251°F)	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> No information available	<b>pH:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> Miscible with water	<b>Solubility:</b> Soluble in Water Soluble in Methanol	

**10. STABILITY AND REACTIVITY**

**Reactivity**  
Reactive with strong oxidizing agents

**Chemical stability**

**Stability:** Sensitive to air. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Exposure to air. Heat. Avoid dust formation. Incompatible materials.

**Incompatible Materials:** Strong oxidizing agents

**Hazardous decomposition products:** Carbon oxides. Nitrogen oxides (NOx).

**Other Information**

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Skin. Eyes. Ingestion. Inhalation.

### Acute Toxicity

#### Component Information

trans-4-Aminocyclohexanol

CAS-No. 27489-62-9

- LD50/oral/rat = No information available
- LD50/oral/mouse = No information available
- LD50/dermal/rabbit = No information available
- LD50/dermal/rat = No information available
- LC50/inhalation/rat = No information available
- LC50/inhalation/mouse = No information available
- Other LD50 or LC50 information = No information available

#### Product Information

**LD50/oral/rat =**  
**VALUE- Acute Tox Oral =** No information available

**LD50/oral/mouse =**  
**Value - Acute Tox Oral =** No information available

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal =** No information available

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal =** No information available

**LC50/inhalation/rat**  
**VALUE-Vapor =** No information available  
**VALUE-Gas =** No information available  
**VALUE-Dust/Mist =** No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor =** No information available  
**VALUE - Gas =** No information available  
**VALUE - Dust/Mist =** No information available

**Product code:** A1572

**Product name:**  
trans-4-Aminocyclohexanol

## Symptoms

<b>Skin Contact:</b>	Corrosive. Contact causes severe skin irritation and possible burns. Can cause burning pain, inflammation and blisters.
<b>Eye Contact:</b>	Causes severe eye irritation and possible burns. Corrosive to the eyes and may cause severe damage including blindness. Can cause severe injury.
<b>Inhalation</b>	May cause irritation of respiratory tract. May cause chemical burns to the respiratory tract.
<b>Ingestion</b>	Causes digestive (gastrointestinal) tract irritation. Causes digestive or gastrointestinal tract burns. May cause perforation of the digestive tract. Corrosive to the mouth, throat, and stomach. Symptoms may include a burning sensation in the mouth, throat, and stomach. Ingestion may cause nausea, vomiting.
<b>Aspiration hazard</b>	No information available.

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Chronic Toxicity</b>	No information available.
<b>Sensitization:</b>	No information available.
<b>Mutagenic Effects:</b>	No information available
<b>Carcinogenic effects:</b>	Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
trans-4-Aminocyclohexanol	27489-62-9	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

<b><u>Reproductive toxicity</u></b>	No data is available
<b>Reproductive Effects:</b>	No information available
<b>Developmental Effects:</b>	No information available
<b>Teratogenic Effects:</b>	No information available

## Specific Target Organ Toxicity

<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Target Organs:</b>	No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

<b>Ecotoxicity effects:</b>	No data available.
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**Product code:** A1572

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trans-4-Aminocyclohexanol

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**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
trans-4-Aminocyclohexanol	27489-62-9	None	None	None	None

### 14. TRANSPORT INFORMATION

#### DOT

**UN-No:** UN3259  
**Proper Shipping Name:** Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol)  
**Hazard Class:** 8  
**Subsidiary Class:** No information available  
**Packing group:** III  
**Emergency Response Guide Number:** 154  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** IB8, IP3, T1, TP33  
**Symbol(s):** No information available  
**Description:** UN3259, Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol), 8, III

#### TDG (Canada)

**UN-No:** UN3259  
**Proper Shipping Name:** Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No Information available  
**Description:** UN3259, Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol), 8, III

#### ADR

**UN-No:** UN3259  
**Proper Shipping Name:** Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol)  
**Hazard Class:** 8  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Special Provisions:** 274  
**Description:** UN3259, Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol), 8, III

#### IMO / IMDG

**Product code:** A1572

**Product name:**  
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**UN-No:** UN3259  
**Proper Shipping Name:** Amines, liquid, corrosive, n.o.s. (4-picolyamine)  
 Amines, solid, corrosive, n.o.s. [4-(Aminomethyl)piperidine]  
 Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No information available  
**EMS:** F-A  
**Special Provisions:** 223, 274  
**Description:** UN3259, Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol), 8, III

**RID**

**UN-No:** UN3259  
**Proper Shipping Name:** Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Special Provisions:** 274  
**Description:** UN3259, Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol), 8, III

**ICAO**

**UN-No:** UN3259  
**Proper Shipping Name:** Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN3259, Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol), 8, III  
**Special Provisions:** A3

**IATA**

**UN-No:** UN3259  
**Proper Shipping Name:** Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**ERG Code:** 8L  
**Special Provisions:** No information available  
**Description:** UN3259, Amines, solid, corrosive, n.o.s. (trans-4-Aminocyclohexanol), 8, III

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>trans-4-Aminocyclohexanol</i>	27489-62-9	Not Listed	Not present	Not present	Not present	Present	Not present	Present 248-492-8

**U.S. Regulations**

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Product code:** A1572

**Product name:**  
trans-4-Aminocyclohexanol

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
trans-4-Aminocyclohexanol	27489-62-9	Not Listed	Not Listed	Not Listed	Not Listed

#### CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>trans-4-Aminocyclohexanol</i>	27489-62-9	None	None	None	None	None

#### U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
trans-4-Aminocyclohexanol	27489-62-9	Not Applicable	Not Applicable

#### Canada

#### WHMIS hazard class:

E Corrosive material

#### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

#### Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
trans-4-Aminocyclohexanol	27489-62-9	Not Listed	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
trans-4-Aminocyclohexanol	27489-62-9	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
trans-4-Aminocyclohexanol	27489-62-9	Not listed

#### EU Classification

##### R-phrase(s)

R34 - Causes burns.

##### S -phrase(s)

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
trans-4-Aminocyclohexanol	27489-62-9		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

#### Indication of danger:

C - Corrosive.

Product code: A1572

Product name:  
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## 16. OTHER INFORMATION

**Preparation Date:** 11/22/2016  
**Revision Date:** Not Applicable  
**Prepared by:** Roumann Pangilinan

**Disclaimer:** All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**