

Material Safety Data Sheet (MSDS)- **Cyclohexylamine**

1. Chemical Product and Company Identification

Product Name : Cyclohexylamine
Catalog Codes : SLC3241
CAS# : 108-91-8
RTECS : GX0700000
TSCA : TSCA 8(b) inventory: Cyclohexylamine
CI# : Not available.
Synonym : NA
Chemical Formula : C₆H₁₃N

COMPANY IDENTIFICATION

Supplier: **Pon Pure Chemicals Group**
CHENNAI, TAMILNADU, INDIA

24 Hour Health Emergency (91) 8939878447

(91) 9444038694

Transportation Emergency Phone (91) 8939768680

Company Name	Place	EMERGENCY TELEPHONE NUMBER
Pon Pure Chemicals Group	India	Day Emergency - 044-26161803-26161809
Name	CAS #	% by Weight
Cyclohexylamine	108-91-8	100

2. Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Cyclohexylamine	108-91-8	100

Toxicological Data on Ingredients: Cyclohexylamine: ORAL (LD50): Acute: 156 mg/kg [Rat]. 224 mg/kg [Mouse]. DERMAL (LD50): Acute: 276 mg/kg [Rabbit].

3. Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (permeator). Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce

burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to the nervous system, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchialinfection. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

4. First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a

collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

5. Fire and Explosion Data

Flammability of the Product : Flammable.

Auto-Ignition Temperature : 293°C (559.4°F)

Flash Points : CLOSED CUP: 31°C (87.8°F).

: OPEN CUP: 32°C (89.6°F) (Cleveland).

Flammable Limits : Not available.

Products of Combustion : These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of oxidizing materials.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water. **SMALL FIRE:** Use DRY chemical powder. **LARGE FIRE:** Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

6. Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.

Large Spill:

Flammable liquid. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and Storage

Precautions:

Keep locked up Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

8.Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 10 (ppm) TWA: 40 (mg/m³) Consult local authorities for acceptable exposure limits.

9. Physical and Chemical Properties

Physical state and appearance	: Liquid.
Odor	: Fish. Amine like.
Taste	: Not available.
Molecular Weight	: 99.17 g/mole
Color	: Colorless to light yellow.
pH (1% soln/water)	: 11 [Basic.]
Boiling Point	: 134.5°C (274.1°F)
Melting Point	: -17.7°C (0.1°F)
Critical Temperature	: Not available.
Specific Gravity	: 0.8647 (Water = 1)
Vapor Pressure	: 10.7 mm of Hg (@ 20°C)
Vapor Density	: 3.42 (Air = 1)
Volatility	: Not available.
Odor Threshold	: 26 ppm
Water/Oil Dist. Coeff.	: The product is more soluble in oil; log(oil/water) = 1.5
Ionicity (in Water)	: Not available.
Dispersion Properties	: See solubility in water.
Solubility	: Easily soluble in cold water.

10. Stability and Reactivity Data

Stability	: The product is stable.
Conditions of Instability	: Not available.
Incompatibility with various substances	: Not available.
Corrosivity	: Non-corrosive in presence of glass.
Special Remarks on Reactivity	: Not available.
Special Remarks on Corrosivity	: Not available.
Polymerization	: No.

11. Toxicological Information

Routes of Entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50) : 156 mg/kg [Rat]. Acute dermal toxicity
: (LD50): 276 mg/kg [Rabbit].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS : A4 (Not classifiable for human or animal.) by ACGIH. The substance is toxic to the nervous system, upper respiratory tract.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

12. Ecological Information

Ecotoxicity : Not available.

BOD5 and COD : Not available.

Products of Biodegradation : Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

13. Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport Information

DOT Classification : CLASS 8: Corrosive liquid.

Identification : Corrosive liquids n.o.s. : UN2357 PG: II

Special Provisions for Transport : Not available.

15. Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: Cyclohexylamine Florida: Cyclohexylamine Minnesota:

Cyclohexylamine Massachusetts RTK: Cyclohexylamine New Jersey: Cyclohexylamine

TSCA 8(b) inventory: Cyclohexylamine SARA 302/304/311/312 extremely hazardous substances: Cyclohexylamine CERCLA: Hazardous substances.: Cyclohexylamine.

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard

(29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive liquid.

DSCL (EEC):

R10- Flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard	: 3
Fire Hazard	: 3
Reactivity	: 0
Personal Protection	: NA

National Fire Protection Association (U.S.A.):

Health	: 3
Flammability	: 3
Reactivity	: 0
Specific hazard	: NA

Protective Equipment:

Gloves, Full suit, Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate face shield.

16. Other Information

Disclaimer:

The information and recommendations contained herein are, to the best of **Pon Pure Chemicals Group** knowledge and belief, accurate and reliable as of the date issued. You can contact **Pon Pure Chemicals Group** to ensure that this document is the most current available from **Pon Pure Chemicals Group**. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted.