

Chemical Safety Data Sheet

Section 1 IDENTIFICATION

GHS Product identifier: Cyclohexylamine.

Other means of identification: 1-Aminocyclohexane.

Recommended use of the chemical and restrictions on use: This material can be used as additive. It can also be used as raw material of accelerants, pesticides, flavors, dyes, etc.

Supplier's details: Nanjing FNAT Chemical Co.,Ltd.

Emergency phone number: 86-25-86442672

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Flammable liquids Category 3

Acute toxicity, oral Category 4

Acute toxicity, dermal Category 4

Skin corrosion/irritation Category 1B

Serious eye damage/eye irritation Category 1

Reproductive toxicity Category 2

GHS Label elements, including precautionary statements:



Signal word: Danger

Hazard statement(s): Flammable liquid and vapor. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Suspected of damaging fertility or the unborn child.

Precautionary statement(s):

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dusts or mists. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Response:

In case of fire: Use water spray, foam or chemical powder to extinguish. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Rinse skin with water/shower. Call a poison center/doctor if you feel unwell. Specific treatment (see under for further information). Take off contaminated clothing and wash it before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment (see under for further information). 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/doctor. If exposed or concerned: Get medical advice/attention.

Storage:

Store in a well-ventilated place. Keep cool. Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification: /

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Cyclohexylamine	108-91-8	99.3%

Section 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If Ingestion: Rinse mouth with water. Do not induce vomit. Consult a physician.

Most important symptoms/effects, acute and delayed: /

Indication of immediate medical attention and special treatment needed, if necessary: /

Section 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Use alcohol-resistant foam, chemical powder or water spray.

Special hazards arising from the chemical: Liquid and vapour are flammable. May explode and burn in high temperature and fire and release toxic fumes.

Special protective actions for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up: Contain spillage and then collect with pump and place in a clean container for disposal according to local regulations.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: Wear protective gloves/eye protection/face protection/protective clothing. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking.

Conditions for safe storage, including any incompatibilities: 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. Keep away from flammable materials, acids and oxidizers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Source	Material	TWA	STEL
China Occupational Exposure Limits for Hazardous Agents in the Workplace	Cyclohexylamine	10 mg/m ³	20 mg/m ³
Appropriate engineering controls: Local exhaust ventilation or a process enclosure ventilation system may be required.			
Individual protection measures			
Eye/face protection: Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.			
Skin protection: Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber. Impervious clothing,			
Respiratory protection: Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant.			
Thermal hazards: /			

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, colour etc)	Colorless transparent liquid.
Odour	/
Odour Threshold	/
pH	/
Melting point/freezing point	-17.7°C.
Initial boiling point and boiling range	134.5°C.
Flash point	32.0°C.
Evaporation rate	/
Flammability (solid, gas)	/
Upper/lower flammability or explosive limits	1.5%~9.4%.
Vapour pressure	1.4kPa (20°C).
Vapour density	3.42.
Relative density	0.86.
Solubility(ies)	Miscible with water.
Partition coefficient: n-octanol/water	1.4.
Auto-ignition temperature	293°C.
Decomposition temperature	/
Viscosity	/

Section 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: This material is stable in normal temperature.

Possibility of hazardous reactions: Decomposes on burning. This produces toxic and corrosive fumes including nitrogen oxides. The substance is a strong base. It reacts violently with acid and is corrosive. Reacts violently with strong oxidants. This generates fire hazard. Attacks aluminum, copper and zinc.

Conditions to avoid: Spark, high temperature and static electricity.

Incompatible materials: Flammable materials, acids and oxidizers.

Hazardous decomposition products: Oxycarbides and nitrogen oxides.

Section 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled, swallowed, skin, eyes.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects: Accidental ingestion of the material may be corrosive and cause cough and throat pain. Oral intake cause headache, giddiness, vomit and other symptoms. This material may produce skin and eyes burn.

Chronic health effects: The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterized by skin redness (erythema) thickening of the epidermis.

Numerical measures of toxicity(such as acute toxicity estimates):

Dermal (rabbit) LD50: 277 mg/kg

Inhalation (rat) LC50: 7500 mg/m³

Oral (rat) LD50: 156 mg/kg

Section 12 ECOLOGICAL INFORMATION

Toxicity: /

Persistence and degradability: /

Bioaccumulative potential: /

Mobility in soil: /

Other adverse effects: /

Section 13 DISPOSAL CONSIDERATIONS

Disposal methods: Burial in a land-fill specifically licensed to accept chemical. Reuse of broken container is forbidden.

Section 14 TRANSPORT INFORMATION

UN number: 2357.

UN proper shipping name: CYCLOHEXYLAMINE.

Transport hazard class(es) : 8+3.

Packing group, if applicable: II.

Environmental hazards: /

Special precautions for user: /

Section 15 REGULATORY INFORMATION

Regulations: This safety data sheet is in compliance with the following national standards: GB 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 18218-2009, GB 15258-2009, GB 6944-2012, GB 190-2009, GB 191-2009, GB 12268-2008, GA 57-1993, GBZ 2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation [Published by the Ministry of Railways, 2008], Dangerous Chemicals Safety Administrative Regulation [Published by the State Council, 2011].

Section 16 OTHER INFORMATION

References	UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals
Form Date	9-Sep-2014

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer / supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.