

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.
 CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

MATERIAL SAFETY DATA SHEET (MSDS)

CYCLOHEXYLAMINE (FOR SYNTHESIS)

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : CYCLOHEXYLAMINE (FOR SYNTHESIS)

Product code : SS0114800500

Identification of the product : cyclohexylamine
 CAS No :108-91-8
 EC No :203-629-0
 Annex No :612-050-00-6

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification : SUVCHEM
 Chaitanya Tower, 2nd Floor, Office # 206,
 Siddharth Nagar, S.V. Road,
 Goregaon (West), Mumbai - 400062,
 Maharashtra, India.
 Contact: +91 22 28725393 / 94 / 95
 Email ID: info@suvchem.com/care@suvchem.com

1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : R10
 Repr. Cat. 3; R62
 Xn; R21/22
 C; R34

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Reproductive toxicity - Fertility - Category 2 - Warning (CLP : Repr. 2) H361
 Skin corrosion - Category 1B - Danger (CLP : Skin Corr. 1B) H314
 Serious eye damage - Category 1 - Danger (CLP : Eye Dam. 1) H318
 Acute toxicity, dermal - Category 4 - Warning (CLP : Acute Tox. 4) H312
 Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302

Physical hazards : Flammable liquids - Category 3 - Warning (CLP : Flam. Liq. 3) H226

2.2. Label elements

MATERIAL SAFETY DATA SHEET (MSDS)
CYCLOHEXYLAMINE (FOR SYNTHESIS)
2. Hazards identification -DSD (continued)
Labelling EC 67/548 or EC 1999/45
Symbol(s)

Symbol(s)

: C : Corrosive

R Phrase(s)

: R10 : Flammable.

R21/22 : Harmful in contact with skin and if swallowed.

R34 : Causes burns.

R62 : Possible risk of impaired fertility.

S Phrase(s)

: S1/2 : Keep locked up and out of reach of children.

S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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

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

Contains

: cyclohexylamine

Labelling Regulation EC 1272/2008 (CLP)
Hazard pictograms

Signal words

: Danger

Hazard statements

: H226 : Flammable liquid and vapour.

H314 : Causes severe skin burns and eye damage.

H361f : Suspected of damaging fertility.

H302 : Harmful if swallowed.

H312 : Harmful in contact with skin.

Precautionary statements
• General

: P102: Keep out of reach of children.

P103: Read label before use.

P101: If medical advice is needed, have product container or label at hand.

P201: Obtain special instructions before use.

• Prevention

: P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical, ventilating, lighting, ..., equipment.

P210: Keep away from heat, sparks, open flames or hot surfaces. - No smoking.

P280: Wear protective gloves, protective clothing, eye protection, face protection.

P260: Do not breathe dust, fume, gas, mist, vapours, spray.

P233: Keep container tightly closed.

P264: Wash thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

• Response

: P302+P352: IF ON SKIN : Wash with plenty of soap and water.

P301+P330+P331: IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.

P308+P313: If exposed or concerned : get medical advice.

P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes.

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.
 CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

MATERIAL SAFETY DATA SHEET (MSDS)

CYCLOHEXYLAMINE (FOR SYNTHESIS)

2. Hazards identification -DSD (continued)

Remove contact lenses, if present and easy to do. Continue rinsing.
 P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.
 P363: Wash contaminated clothing before reuse.
 P370+P378: In case of fire: Use for extinction.

- **Storage** : P403+P235: Store in well-ventilated place. Keep cool.
 P405: Store locked up.
- **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contains** : cyclohexylamine

2.3. Other hazards

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation : cyclohexylamine
 CAS No :108-91-8
 EC No :203-629-0
 Annex No :612-050-00-6
 Substance.

Substance name	Contents	CAS No	EC No	Annex No	REACH Ref.	Classification
cyclohexylamine	: 100 %	108-91-8	203-629-0	612-050-00-6	----	R10 Repr. Cat. 3; R62 Xn; R21/22 C; R34 ----- Skin Corr. 1B _ H314 Eye Dam 1 _ H318 Flam. Liq. 3 _ H226 Acute Tox. 4 (skin) _ H312 Acute Tox. 4 (oral) _ H302 Repr. 2 _ H361f

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures

4.1. Description of first aid measures

- Inhalation** : Immediately call a POISON CENTER or doctor. Remove to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Specific treatment (see on this label). Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.
- Eye contact** : 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.
- Ingestion** : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

MATERIAL SAFETY DATA SHEET (MSDS)
CYCLOHEXYLAMINE (FOR SYNTHESIS)
4. First aid measures (continued)
4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use : Causes severe skin burns and eye damage.
 Causes serious eye damage.
 Suspected of damaging fertility.
 Repeated exposure to this material can result in absorption through skin causing significant health hazard.
 Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

General information : Never give anything by mouth to an unconscious person.
 If exposed or concerned : get medical advice.

5. Fire-fighting measures
5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.
Surrounding fires : Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.
 Thermal decomposition generates : Corrosive vapours.

5.3. Advice for fire-fighters

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection.
Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection.
 Ventilate area.
Technical measures : Use special care to avoid static electric charges.
Special precautions : Remove ignition sources. No naked lights. No smoking.
For non-emergency personnel : Evacuate unnecessary personnel.

6.2. Environmental precautions

MATERIAL SAFETY DATA SHEET (MSDS)
CYCLOHEXYLAMINE (FOR SYNTHESIS)
6. Accidental release measures (continued)

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Clean up methods : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage
7.1. Precautions for safe handling

Handling : Handle empty containers with care because residual vapours are flammable. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Take precautionary measures against static discharge. Wash contaminated clothing before reuse. Wash thoroughly after handling. Do not breathe dust, fume, gas, mist, vapours, spray.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, ..., equipment. Use only non-sparking tools.

Special precautions : No naked lights. No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Ground/bond container and receiving equipment. Keep container tightly closed.

Storage regulation : Comply with applicable regulations.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

Specific end use(s) : None.

8. Exposure controls/personal protection
8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

• **Respiratory protection** : Wear approved mask.

MATERIAL SAFETY DATA SHEET (MSDS)
CYCLOHEXYLAMINE (FOR SYNTHESIS)
8. Exposure controls/personal protection (continued)

- Hand protection : Wear protective gloves.
- Skin protection : Wear suitable protective clothing.
- Eye protection : Chemical goggles or face shield.
- Others : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Liquid.
Colour	: Clear Colorless
Odour	: Amine like
Odour threshold	: No data available.
pH value	: No data available.
Melting point [°C]	: -17 °C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A Flammable liquid and vapour.
Flash point [°C]	: 27 °C
Boiling point [°C]	: 134 °C
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: 10 mm Hg @ 200C
Vapour pressure mm/Hg	: 10 mm Hg @ 200C
Vapour density	: 3,42
Density [g/cm3]	: 0,8647
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Soluble
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm2/s]	: N/A

9.2. Other information

MATERIAL SAFETY DATA SHEET (MSDS)
CYCLOHEXYLAMINE (FOR SYNTHESIS)
9. Physical and chemical properties (continued)

Explosive properties	: N/A
Explosion limits - upper [%]	: 9,40%
Explosion limits - lower [%]	: 1,60%
Oxidising properties	: No data available.

10. Stability and reactivity
10.1. Reactivity

Reactivity	: Not established.
------------	--------------------

10.2. Chemical stability

Chemical stability	: Stable under recommended storage conditions.
--------------------	--

10.3. Possibility of hazardous reactions

Hazardous reactions	: Not established.
---------------------	--------------------

10.4. Conditions to avoid

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.
---------------------	---

10.5. Incompatible materials

Materials to avoid	: Strong acids. Strong bases.
--------------------	-------------------------------

10.6. Hazardous decomposition products

Hazardous decomposition products	: Fumes. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours. May release flammable gases.
----------------------------------	---

11. Toxicological information
11.1. Information on toxicological effects
Acute toxicity

• Inhalation	: Based on available data, the classification criteria are not met.
• Dermal	: Harmful in contact with skin.
• Ingestion	: Harmful if swallowed.

Corrosion

: Causes severe skin burns and eye damage. Causes serious eye damage.
--

Irritation

: Based on available data, the classification criteria are not met.

MATERIAL SAFETY DATA SHEET (MSDS)
CYCLOHEXYLAMINE (FOR SYNTHESIS)
11. Toxicological information (continued)

Sensitization	: Based on available data, the classification criteria are not met.
Mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.
Toxic for reproduction	: Suspected of damaging fertility.
STOT-single exposure	: Based on available data, the classification criteria are not met.
STOT-repeated exposure	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.

12. Ecological information
12.1. Toxicity

Toxicity information	: Not established.
-----------------------------	--------------------

12.2. Persistence - degradability

Persistence - degradability	: Biodegradable.
------------------------------------	------------------

12.3. Bioaccumulative potential

Bioaccumulative potential	: Not established.
----------------------------------	--------------------

12.4. Mobility in soil

Mobility in soil	: Not established.
-------------------------	--------------------

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.
---	---

12.6. Other adverse effects

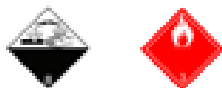
Environmental precautions	: Avoid release to the environment.
----------------------------------	-------------------------------------

13. Disposal considerations
13.1. Waste treatment methods

General	: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Special precautions	: Handle empty containers with care because residual vapours are flammable.

MATERIAL SAFETY DATA SHEET (MSDS)
CYCLOHEXYLAMINE (FOR SYNTHESIS)
14. Transport information
14.1. Land transport (ADR-RID)

Proper shipping name : CYCLOHEXYLAMINE
 UN N° : 2357
 H.I. nr : 83
 ADR - Class : 8
 Labelling - Transport : 8 : Corrosive substance. 3 : Flammable liquid.



ADR - Classification code : CF1
 ADR - Group : II
 ADR - Packing instructions : P001
 ADR - Limited Quantity : 1 L
 ADR - Tunnel code



: D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

14.2. Sea transport (IMDG) [English only]

Proper shipping name : CYCLOHEXYLAMINE
 UN N° : 2357
 IMO-IMDG - Class or division : 8 : Corrosive substance. (3 : Flammable liquid.)
 IMO-IMDG - Packing group : II
 IMO-IMDG - Packing instructions : P001
 IMO-IMDG - Limited quantities : 1 L
 IMO-IMDG - Marine pollution : No
 EMS-Nr : F-E S-C

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : CYCLOHEXYLAMINE
 UN N° : 2357
 IATA - Class or division : 8 : Corrosive substance. (3 : Flammable liquid.)
 IATA - Packing group : II
 IATA - Passenger and Cargo Aircraft : ALLOWED
 - Passenger and Cargo - Packing instruction : 851

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.
 CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

MATERIAL SAFETY DATA SHEET (MSDS)

CYCLOHEXYLAMINE (FOR SYNTHESIS)

14. Transport information (continued)

- Passenger and Cargo - Maximum : 1 L
 Quantity/Packing
 IATA - Cargo only : ALLOWED
 - Cargo only - Packing instruction : 855
 - Cargo only - Maximum Quantity/ : 30 L
 Packing
 IATA - Limited Quantities : 0.5 L
 ERG-Nr : 8F

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental : Ensure all national/local regulations are observed.
 regulations/legislation specific for the
 substance or mixture
 REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.
 REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

16. Other information

Revision : Revision - See : *
 Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.
 vPvB: very persistent and very bioaccumulative
 Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF
 THE COUNCIL of 16 December 2008 on classification, labelling and packaging of
 substances and mixtures, amending and repealing Directives 67/548/EEC and
 1999/45/EC, and amending Regulation (EC) No 1907/2006
 List of relevant R phrases (heading 3) : R10 : Flammable.
 R21/22 : Harmful in contact with skin and if swallowed.
 R34 : Causes burns.
 R62 : Possible risk of impaired fertility.
 List of full text of H-statements in : H226 : Flammable liquid and vapour.
 section 3 : H302 : Harmful if swallowed.
 H312 : Harmful in contact with skin.
 H314 : Causes severe skin burns and eye damage.
 H318 : Causes serious eye damage.
 H361f : Suspected of damaging fertility.
 Further information : None.

MATERIAL SAFETY DATA SHEET (MSDS)

CYCLOHEXYLAMINE (FOR SYNTHESIS)

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

End of document