

## Safety Data Sheet: Cyclohexylamine

### 1. Identification

|                          |                                                                                                                                                                                                                                                                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product</b>           | Cyclohexylamine; CAS 108-91-8; EC 203-629-0                                                                                                                                                                                                                                      |
| <b>Use</b>               | Industrial chemical formulation and professionally supervised raw-material processing.                                                                                                                                                                                           |
| <b>Company</b>           | Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)                                                                                                                                                                                                                                      |
| <b>Address</b>           | Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China                                                                                                                                                                                    |
| <b>Telephone / email</b> | +86-21-54265599 / sales@zxchem.com.cn                                                                                                                                                                                                                                            |
| <b>Emergency contact</b> | ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.                                                                                                                                                    |
| <b>Scope</b>             | Reference safety information for Cyclohexylamine. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation. |

### 2. Hazards Identification

|                              |                                                                                                                                                                                                         |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>        | Flammable liquid 3; oral toxicity 4; dermal toxicity 3; skin corrosion 1B; eye damage 1; reproductive toxicity 2.                                                                                       |
| <b>Signal word / symbols</b> | Danger; GHS02, GHS05, GHS06, GHS08                                                                                                                                                                      |
| <b>Hazard statements</b>     | H226: flammable liquid. H302/H311: harmful ingestion and toxic skin exposure. H314: severe burns and eye injury. H361: suspected fertility/developmental harm.                                          |
| <b>Prevention</b>            | Use adequate ventilation; avoid inhaling mist. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area. |
| <b>Response</b>              | After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.                |
| <b>Environment</b>           | Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.                                                                                                 |



### 3. Composition / Information on Ingredients

|                             |                                                                                                                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reference ingredient</b> | Cyclohexylamine CAS 108-91-8, >95% in reference; supplied purity ≥99.5%.                                                                                                                                        |
| <b>Supply grade</b>         | Purity ≥99.5%                                                                                                                                                                                                   |
| <b>Applicability</b>        | The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document. |

#### 4. First-Aid Measures

|                   |                                                                                                                                                                                                              |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General</b>    | Significant exposure requires immediate medical attention. Protect rescuers and provide this product information to the clinician.                                                                           |
| <b>Inhalation</b> | Move the casualty to fresh air without exposing rescuers. Obtain urgent medical attention for breathing problems; trained personnel should use a barrier or medical device if ventilation support is needed. |
| <b>Skin</b>       | Immediately remove contaminated clothing while flushing exposed skin thoroughly with water. Obtain prompt medical treatment for chemical burns.                                                              |
| <b>Eyes</b>       | Begin gentle continuous water irrigation immediately for at least 15minutes. Remove contact lenses when easy and seek urgent medical attention.                                                              |
| <b>Ingestion</b>  | Rinse the mouth; do not induce vomiting. Give nothing orally to an unconscious person. Obtain immediate medical advice because corrosive digestive injury is possible.                                       |
| <b>Treatment</b>  | Treatment is directed by a clinician; do not attempt chemical neutralization on the casualty.                                                                                                                |

#### 5. Fire-Fighting Measures

|                            |                                                                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Extinguishing media</b> | Use water spray, foam, dry chemical or carbon dioxide suited to the surrounding fire.                                                              |
| <b>Hazards</b>             | Carbon and nitrogen oxides during fire.                                                                                                            |
| <b>Protection</b>          | Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains. |

#### 6. Accidental Release Measures

|                    |                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personnel</b>   | Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and mist exposure.             |
| <b>Environment</b> | Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.        |
| <b>Cleanup</b>     | Stop the leak if safe. Absorb liquid with a compatible inert material and collect in closed labelled containers. Do not wash into drains. |

#### 7. Handling and Storage

|                          |                                                                                                                                                                    |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b>          | Use controlled transfer and effective ventilation. Avoid generating mist and prevent contamination of the work area.                                               |
| <b>Storage</b>           | Store tightly closed in a cool, dry, well-ventilated corrosives area, away from heat, sparks and flames. Segregate acids and oxidizers and keep access restricted. |
| <b>Incompatibilities</b> | Acids and strong oxidizers; segregate incompatible reactive chemicals.                                                                                             |
| <b>Specific use</b>      | Evaluate compatibility and appropriate operating conditions in the complete formulation before industrial use.                                                     |

## 8. Exposure Controls / Personal Protection

|                               |                                                                                                                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure limits</b>        | The selected reference reports China TWA10 mg/m <sup>3</sup> and STEL20 mg/m <sup>3</sup> ; ACGIH TWA10 ppm; NIOSH REL10 ppm/40 mg/m <sup>3</sup> . Check current local requirements before use. |
| <b>Engineering controls</b>   | Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities.                                                                                  |
| <b>Personal protection</b>    | Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.                                               |
| <b>Respiratory protection</b> | Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.                                                  |
| <b>Hygiene</b>                | Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.                                                                                      |

## 9. Physical and Chemical Properties

|                                   |                                                                                                                                                                                                   |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Appearance</b>                 | Colorless to yellow liquid                                                                                                                                                                        |
| <b>Formula / molecular weight</b> | C <sub>6</sub> H <sub>13</sub> N / 99.18 g/mol                                                                                                                                                    |
| <b>Flash point, closed cup</b>    | 27°C                                                                                                                                                                                              |
| <b>Boiling range</b>              | 133–134°C                                                                                                                                                                                         |
| <b>Melting point</b>              | –17°C                                                                                                                                                                                             |
| <b>Density, reference</b>         | 0.867                                                                                                                                                                                             |
| <b>pH, 100 g/L water</b>          | 11.5                                                                                                                                                                                              |
| <b>Other properties</b>           | Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred. |

## 10. Stability and Reactivity

|                          |                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------|
| <b>Stability</b>         | Handle and store under the recommended conditions. Prevent contamination and unnecessary heating. |
| <b>Incompatibilities</b> | Acids and strong oxidizers; segregate incompatible reactive chemicals.                            |
| <b>Decomposition</b>     | Carbon and nitrogen oxides during fire.                                                           |

## 11. Toxicological Information

|                                 |                                                                                                                                                    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure effects</b>         | Acute toxicity, corrosive injury and suspected reproductive effects.                                                                               |
| <b>Reference classification</b> | Flammable liquid 3; oral toxicity 4; dermal toxicity 3; skin corrosion 1B; eye damage 1; reproductive toxicity 2.                                  |
| <b>Toxicological data</b>       | Acute toxicity, corrosive injury and suspected reproductive effects. The source contains further study detail; no batch toxicity study is claimed. |

## 12. Ecological Information

|                              |                                                                                                                          |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental effects</b> | Prevent discharge to water, drains and soil. Contain spilled liquid and contaminated waste.                              |
| <b>Controls</b>              | Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.           |
| <b>Assessment</b>            | No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects. |

**13. Disposal Considerations**

|                  |                                                                                                                                                          |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product</b>   | Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements. |
| <b>Packaging</b> | Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.      |

**14. Transport Information**

|                              |                                                                                                                                                         |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>        | Class 8 — Corrosive (subsidiary Class 3)                                                                                                                |
| <b>UN number</b>             | UN 2357                                                                                                                                                 |
| <b>Shipping name</b>         | Cyclohexylamine                                                                                                                                         |
| <b>Class / packing group</b> | Road/rail, IMDG and IATA: Class 8, subsidiary Class 3, packing group II.                                                                                |
| <b>Transport precautions</b> | Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment. |

**15. Regulatory Information**

|                     |                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Identity</b>     | Cyclohexylamine; CAS 108-91-8; EC 203-629-0                                                                                              |
| <b>HS reference</b> | 292130; reference heading rather than a destination customs ruling.                                                                      |
| <b>Compliance</b>   | Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish finished-product authorization. |
| <b>Assessment</b>   | No ZXCHEM-specific chemical safety assessment or destination registration is asserted.                                                   |

**16. Other Information**

|                        |                                                                                                                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hazard meanings</b> | H226: flammable liquid. H302/H311: harmful ingestion and toxic skin exposure. H314: severe burns and eye injury. H361: suspected fertility/developmental harm.                                                                   |
| <b>Limitations</b>     | Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.                                               |
| <b>Revision</b>        | 2026.2; prepared 2026-10-06. Customer-document branding and title corrected; technical safety data retained.                                                                                                                     |
| <b>Document scope</b>  | Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate. |

Revision: 2026.2 | Revision date: 2026-10-06