

Safety Data Sheet: Chloral Hydrate

1. Identification

Product	Chloral Hydrate; CAS 302-17-0; EC 206-117-5
Use	Professional industrial electroplating and chemical development.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Chloral Hydrate. 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

Classification	Acute oral toxicity Category 3; skin irritation Category 2; serious eye irritation Category 2.
Signal word / symbols	Danger; GHS06
Hazard statements	H301: toxic if swallowed. H315: causes skin irritation. H319: causes serious eye irritation.
Prevention	Use contained transfer and effective local extraction. Wear compatible chemical-resistant gloves, protective clothing and safety goggles. Avoid dust, ingestion and all unnecessary contact; maintain eyewash access and obtain immediate medical help after significant exposure.
Response	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.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Chloral hydrate, CAS 302-17-0, EC 206-117-5. Selected crystalline substance reference $\leq 100\%$; supply assay $\geq 99.0\%$. No unidentified impurity fraction is asserted for a delivered lot.
Supply grade	Assay $\geq 99.0\%$
Applicability	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

Inhalation	Move to fresh air and keep comfortable for breathing. Obtain immediate medical advice after significant exposure.
Skin	Remove contaminated clothing and wash skin with plenty of water. Obtain prompt medical assessment.
Eyes	Rinse cautiously with water for at least 15 minutes; remove contact lenses if easy. Obtain immediate medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Immediately call a poison centre or doctor; never give anything orally to an unconscious person.
Symptoms and treatment	Toxic when swallowed. Dust and contact irritate skin and eyes; exposure requires prompt medical assessment.

5. Fire-Fighting Measures

Extinguishing media	Use water spray, carbon dioxide, dry chemical or suitable foam. Cool exposed closed containers when safe. Firefighters require full protective clothing and self-contained breathing apparatus.
Hazards	Thermal decomposition can release carbon oxides, chlorine-containing fumes, hydrogen chloride and chloroform.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personal protection	Use contained transfer and effective local extraction. Wear compatible chemical-resistant gloves, protective clothing and safety goggles. Avoid dust, ingestion and all unnecessary contact; maintain eyewash access and obtain immediate medical help after significant exposure.
Containment	Recover solid material mechanically without generating dust. Collect in labelled closed containers; keep contaminated material segregated.
Environment	Prevent drainage and uncontrolled release; use an approved disposal route.

7. Handling and Storage

Handling	Use contained transfer and effective local extraction. Wear compatible chemical-resistant gloves, protective clothing and safety goggles. Avoid dust, ingestion and all unnecessary contact; maintain eyewash access and obtain immediate medical help after significant exposure.
Storage	Keep tightly closed and locked up in a cool, dry, well-ventilated place. Protect from light and prolonged air exposure; segregate from strong oxidizers, acids, alkaline metals and incompatible alcohols.
Incompatibilities	Strong oxidizing agents, acids, alkaline metals and incompatible alcohols. Protect from heat, light and prolonged air exposure.

8. Exposure Controls / Personal Protection

Exposure limits	No substance-specific numerical occupational limit is supplied in the selected reference. Use containment and effective dust extraction and apply local workplace requirements.
Engineering controls	Use local extraction where dust can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Transparent, colourless crystals
Formula / molecular weight	C ₂ H ₃ Cl ₃ O ₂ / 165.40 g/mol
Physical state	Crystalline solid
Melting point, reference	57°C
Decomposition region, reference	Above approximately 97°C
pH, reference	3.5–5.5 in a 10% aqueous solution
Water solubility	Soluble
Other properties	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

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Strong oxidizing agents, acids, alkaline metals and incompatible alcohols. Protect from heat, light and prolonged air exposure.
Decomposition	Thermal decomposition can release carbon oxides, chlorine-containing fumes, hydrogen chloride and chloroform.

11. Toxicological Information

Exposure effects	Toxic when swallowed. Dust and contact irritate skin and eyes; exposure requires prompt medical assessment.
Reference classification	Acute oral toxicity Category 3; skin irritation Category 2; serious eye irritation Category 2.
Data limits	Reference rat oral LD ₅₀ 479 mg/kg and rat dermal LD ₅₀ 3,030 mg/kg. The selected reference also identifies an IARC Group 2A listing; this is distinct from its acute GHS classification. No supplied-lot chronic study is asserted.

12. Ecological Information

Environmental effects	The selected reference does not establish supplied-grade quantitative aquatic endpoints. Prevent drainage and release; water solubility can facilitate dispersion after a spill.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

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

14. Transport Information

Classification	Class 6.1 — Toxic substance
UN number	UN 2811
Shipping name	TOXIC SOLID, ORGANIC, N.O.S. (chloral hydrate)
Class / packing group	ADR / RID, IMDG and IATA: UN 2811, Class 6.1, packing group II in the selected full crystalline-substance reference.
Transport precautions	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

Identity	Chloral Hydrate; CAS 302-17-0; EC 206-117-5
HS reference	291300; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H301: toxic if swallowed. H315: causes skin irritation. H319: causes serious eye irritation.
Limitations	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.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	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.

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