SAFETY DATA SHEET

Low-Boiling Chloropropene Mixture | Prepared in accordance with UN GHS (Rev. 10) and GB/T 16483-2008 / GB/T 17519-2013 | Revision 1.0 | Date: 2026-11-02

SECTION 1. IDENTIFICATION

Product name	Low-Boiling Chloropropene Mixture (chloropropene light ends)
Product type	Mixture
Recommended use	Industrial use only: raw material / intermediate for chemical synthesis.
Uses advised against	Consumer use; any use other than recommended.
Supplier	Zibo Yixiao Economic and Trade Co., Ltd. Room 206, Entrepreneurship Park, Qilu International Plastics and Chemical City, Linzi District, Zibo, Shandong, China
Manufacturer	Shandong Haiyi Chemical Technology Co., Ltd. Fuyuan 5th Road, Zhanhua District, Binzhou, Shandong, China
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SECTION 2. HAZARDS IDENTIFICATION

GHS classification	Flammable liquids, Category 1 Skin irritation, Category 2 Serious eye irritation, Category 2A Specific target organ toxicity - single exposure, Category 3 (respiratory tract irritation)
Pictograms	GHS02 (flame), GHS07 (exclamation mark)
Signal word	**DANGER**
Hazard statements	H224 Extremely flammable liquid and vapour. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
Precautionary - prevention	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P261 Avoid breathing vapours. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary - response	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTER/doctor if you feel unwell. P337+P313 If eye irritation persists: Get medical advice. P370+P378 In case of fire: Use dry chemical, CO_2 or alcohol-resistant foam to extinguish.
Precautionary - storage / disposal	P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/container in accordance with local/national regulations.
Other hazards	Very volatile; boiling point near ambient temperature. Vapours are heavier than air, may travel to a source of ignition and flash back, and may form explosive mixtures with air. Closed containers may build up pressure when warm. Unsaturated components may polymerize when heated or in contact with peroxides.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	EC No.	Content (wt %)	GHS classification of component
2-Chloropropene	557-98-2	209-187-5	70 - 80	Flam. Liq. 1 (H224); Eye Irrit. 2 (H319); STOT SE 3 (H335)
2-Chloropropane	75-29-6	200-858-8	10 - 15	Flam. Liq. 1 (H224); Acute Tox. 4 (H302, H312, H332)

1-Chloropropene (cis/trans)	590-21-6	209-675-8	8 - 12	Flam. Liq. 2 (H225); Acute Tox. 4 (H302); Skin Irrit. 2 (H315); Eye Irrit. 2 (H319)
Other chlorinated C3 hydrocarbons	-	-	< 5	-

SECTION 4. FIRST-AID MEASURES

Inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen (trained personnel). If not breathing, give artificial respiration. Get medical attention.
Skin contact	Remove contaminated clothing immediately. Wash skin with plenty of water and soap for at least 15 minutes. Get medical advice if irritation persists.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes, holding eyelids apart. Remove contact lenses if easy to do. Get medical attention.
Ingestion	Rinse mouth. Do NOT induce vomiting (aspiration risk). Never give anything by mouth to an unconscious person. Get medical attention.
Main symptoms	Irritation of eyes, skin and respiratory tract; coughing; headache, dizziness and drowsiness at high vapour concentrations.
Note to physician	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical powder, carbon dioxide, alcohol-resistant foam. Water spray to cool containers.
Unsuitable media	Direct water jet (may spread the fire).
Specific hazards	Extremely flammable. Vapours may travel to an ignition source and flash back. Containers may rupture or explode when heated. Combustion produces hydrogen chloride, carbon monoxide, carbon dioxide and possibly phosgene.
Advice for fire-fighters	Wear self-contained breathing apparatus and full protective clothing. Cool exposed containers with water spray from a safe distance. Withdraw immediately if venting noise rises or tank discolours. Prevent run-off from entering drains or watercourses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate the area and keep upwind. Eliminate all ignition sources. Use non-sparking tools and explosion-proof equipment. Wear protective equipment (Section 8). Ensure adequate ventilation.
Environmental precautions	Prevent entry into drains, sewers, surface water and soil.
Containment and clean-up	Small spills: absorb with inert, non-combustible material (sand, vermiculite) and place in closed containers for disposal. Large spills: dike far ahead; cover with foam to reduce vapour; recover with explosion-proof pumps into suitable containers.

SECTION 7. HANDLING AND STORAGE

Safe handling	Handle in closed systems or with local exhaust ventilation. Ground and bond all equipment during transfer. Use non-sparking tools. Avoid contact with skin and eyes and avoid inhaling vapour. No smoking, eating or drinking in work areas.
Storage	Store in a cool, dry, well-ventilated place away from heat, direct sunlight and ignition sources, preferably below 25 °C. Keep containers tightly closed. Store separately from oxidizing agents, strong bases and active metals.
Packaging	ISO tank container (UN portable tank) suitable for Class 3, Packing Group I liquids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits	No occupational exposure limits have been established for the components under GBZ 2.1, OSHA or ACGIH. Keep exposure as low as reasonably practicable.
Engineering controls	Closed system or local exhaust ventilation; explosion-proof equipment; eyewash stations and safety showers nearby.
Respiratory protection	Where vapour concentrations may be high, use a respirator with organic vapour cartridges; in emergencies or confined spaces use self-contained breathing apparatus.

Eye / face protection	Chemical safety goggles; face shield where splashing is possible.
Hand protection	Chemical-resistant gloves (e.g. Viton or PVA); check breakthrough time with the glove supplier.
Skin and body	Flame-retardant, antistatic protective clothing and safety footwear.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless to light yellow, clear liquid
Odour	Characteristic, chlorinated-hydrocarbon odour
Initial boiling point / range	approx. 23 - 38 °C (supplier observation 23.5 - 28 °C)
Flash point	approx. -30 °C (closed cup); main component 2-chloropropene: -20 to -37 °C
Melting point	approx. -117 to -138 °C (components)
Relative density (water = 1)	approx. 0.90 (calculated from components, 20 °C)
Vapour density (air = 1)	approx. 2.6
Flammability limits	approx. 4.5 - 16 % (v/v) (1-chloropropene data)
Solubility in water	Slightly soluble / practically insoluble
Solubility in other solvents	Miscible with alcohols, ethers, hydrocarbons
pH	Not applicable (non-aqueous liquid)
Auto-ignition temperature	No data available
Molecular weight	76.5 - 78.5 (components)

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Hazardous reactions	May polymerize when exposed to heat, light or peroxides. Reacts vigorously with strong oxidizers.
Conditions to avoid	Heat, flames, sparks, static discharge, direct sunlight, prolonged storage at elevated temperature.
Incompatible materials	Strong oxidizing agents, strong bases, alkali and alkaline-earth metals, aluminium and its alloys.
Hazardous decomposition products	Hydrogen chloride, carbon monoxide, carbon dioxide, phosgene.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity	Mixture not classified (calculated). Component 2-chloropropane: harmful if swallowed, in contact with skin or inhaled (Category 4). Component 1-chloropropene: harmful if swallowed (Category 4).
Skin corrosion / irritation	Causes skin irritation.
Eye damage / irritation	Causes serious eye irritation.
Respiratory / skin sensitization	No data available.
Germ cell mutagenicity	Mutation data reported for 2-chloropropene and 1-chloropropene; not classified.
Carcinogenicity	Not listed by IARC, NTP or OSHA.
STOT - single exposure	May cause respiratory irritation; high vapour concentrations may cause drowsiness or dizziness.
STOT - repeated exposure / aspiration	No data available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	No data available for the mixture. Avoid release to the environment.
Persistence / degradability	Highly volatile; expected to evaporate rapidly from water and soil surfaces.
Bioaccumulation	Low potential expected (low molecular weight, volatile).

Mobility in soil	High volatility; may reach groundwater if spilled in quantity.
Other adverse effects	None known.

SECTION 13. DISPOSAL CONSIDERATIONS

Product	Dispose of as hazardous waste via a licensed waste disposal contractor, e.g. by controlled incineration with flue-gas scrubbing. Do not discharge to drains or the environment.
Contaminated packaging	Empty containers retain flammable vapour. Do not cut, weld or pressurize. Return to supplier or dispose of via a licensed contractor.

SECTION 14. TRANSPORT INFORMATION

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (2-CHLOROPROPENE, 2-CHLOROPROPANE)
Transport hazard class	3
Packing group	I
Label	Flammable liquid (Class 3)
Marine pollutant	No
IMDG EmS	F-E, S-E
Special precautions	Keep away from heat and sources of ignition. Protect from direct sunlight. Ground tanks during loading and unloading.
Bulk transport (IMO)	Not intended for carriage in bulk according to MARPOL Annex II / IBC Code; shipped in ISO tank containers.

SECTION 15. REGULATORY INFORMATION

China	Regulations on the Safe Management of Hazardous Chemicals; Catalogue of Hazardous Chemicals (2015 edition); GB 30000 series (GHS classification); GB 6944 / GB 12268 (dangerous goods); GB 13690.
International	IMDG Code; UN Recommendations on the Transport of Dangerous Goods; UN GHS.
Inventory status	Components listed on EINECS (EC 209-187-5, 200-858-8, 209-675-8) and the US TSCA Inventory.

SECTION 16. OTHER INFORMATION

Classification basis	The mixture classification was derived using the GHS calculation and bridging principles from published component data and the supplier-measured flash point and boiling range.
Key references	Supplier data; Thermo Fisher / Alfa Aesar 2-Chloropropene (L12374) data; TCI product data (C1112, C0267, C0272); NITE Japan GHS classification for 2-chloropropane; NOAA CAMEO Chemicals; EU JRC eNatech substance data.
Revision	Revision 1.0, 2026-11-02 (first issue).
Disclaimer	The information in this SDS is believed to be correct based on present knowledge. It describes the product with regard to safety requirements and does not constitute a guarantee of product properties. Users are responsible for compliance with all applicable laws and regulations.