

1-CHLOROPROPANE

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1. Product Identification

Synonyms: Propyl chloride; n-Chloropropane

CAS No.: 540-54-5

Molecular Weight: 78.54

Chemical Formula: C₃H₇Cl

Product Codes: CHEM-594 and others

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
1-Chloropropane	540-54-5	100	Yes

3. Hazards Identification

Emergency Overview

Major Health Hazards: central nervous system depression

Physical Hazards: Flammable liquid and vapor. Vapor may cause flash fire.

SAF-T-DATA^(tm) Ratings

Health Rating: 1 - Slight

Flammability Rating: 3 - Severe

Reactivity Rating: 0 - None

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES & FACE SHIELD; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:

Short Term Exposure: irritation, headache, symptoms of drunkenness, tingling sensation, visual disturbances, kidney damage, liver damage

Long Term Exposure: no information on significant adverse effects

Skin Contact:

Short Term Exposure: mild irritation

Long Term Exposure: no information on significant adverse effects

Eye Contact:

Short Term Exposure: irritation

Long Term Exposure: no information is available

Ingestion:

Short Term Exposure: symptoms of drunkenness

Long Term Exposure: liver damage

4. First Aid Measures

Inhalation: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin Contact: Wash skin with soap and water for at least 15 minutes while removing contaminated

clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and

shoes before reuse.

Eye Contact: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion: If a large amount is swallowed, get medical attention.

5. Fire Fighting Measures

Fire:

Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

Explosion:

Moderate explosion hazard. Vapor/air mixtures are explosive.

Fire Extinguishing Media:

Alcohol-resistant foam, carbon dioxide, regular dry chemical, water

Large fires: Use alcohol-resistant foam or flood with fine water spray.

Special Information:

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Water may be ineffective.

Lower Flammability Limit: 2.6%

Upper Flammability Limit: 11.1%

Autoignition: 968° F (520° C)

Flammability ClassSS (OSHA): IB

6. Accidental Release Measures

Avoid heat, flames, sparks and other sources of ignition. Remove sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other noncombustible material. Collect spilled material in appropriate container for disposal.

Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

7. Handling and Storage

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Keep separated from incompatible substances.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

No occupational exposure limits established.

Ventilation System:

Provide local exhaust or process enclosure ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

Personal Respirators (NIOSH Approved):

Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridge(s).

Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).

Any air-purifying respirator with a full facepiece and an organic vapor canister.

For Unknown Concentrations or Immediately Dangerous to Life or Health:

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressuredemand or other positive-pressure mode. Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Skin Protection:

Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.

Eye Protection:

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

9. Physical and Chemical Properties

Appearance:

Colorless liquid.

Odor:

Sweet.

Solubility:

Soluble: alcohol, ether, benzene, chloroform

Specific Gravity:

2.6

pH:

N/A

% Volatiles by volume @ 21°C (70°F):

100

Boiling Point:

117° F (47° C)

Freezing Point:

-189° F (-123° C)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Thermal decomposition products: halogenated compounds, oxides of carbon

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Oxidizing materials

Conditions to Avoid:

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

11. Toxicological Information

Toxicity Data: >2 gm/kg oral-rat LD50

Target Organs: Central nervous system

Additional Data: Stimulants such as epinephrine may induce ventricular fibrillation.

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.

14. Transport Information

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: 1-Chloropropane

ID NUMBER: UN1278

HAZARD CLASS OR DIVISION: 3

PACKING GROUP: II

LABELING REQUIREMENTS: 3

QUANTITY LIMITATIONS:

PASSENGER AIRCRAFT OR RAILCAR: Forbidden

CARGO AIRCRAFT ONLY: 60 L

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

SHIPPING NAME: Propyl chloride

UN NUMBER: UN1278
CLASS: 3
PACKING GROUP/CATEGORY: II

15. Regulatory Information

U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart

B): Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 Subpart

C): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B

and C):

ACUTE: Yes

CHRONIC: No

FIRE: Yes

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29 CFR 1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: BD2

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Not determined.

16. Other Information

References: Not available.

Other Special Considerations: Not available.

Product Use:

Laboratory Reagent and Consumer Hobby

Revision Information:

No Changes.

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