

SAFETY DATA SHEET



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PROPYLENE CARBONATE

SDS No. M0177

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Propylene Carbonate

Synonyms: 4-Methyl-2-oxo-1,3-dioxolane; cyclic 1,2-Propylene Carbonate; cyclic Methylene Carbonate; Carbonic Acid cyclic Propylene Ester

Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS No</u>	<u>Percent</u>	<u>Hazardous</u>
Propylene Carbonate	108-32-7	>99%	Yes

2. HAZARDS IDENTIFICATION



Classification:

Eye Irritation: GHS Category 2A

Label Elements

Signal Word: WARNING!

Hazard Statements:

H319 – Causes serious eye irritation.

Precautionary Statements:

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 – If on skin or hair: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

Emergency Overview

Causes eye irritation. May cause skin irritation. Expected to a low hazard in any setting. Moisture sensitive. Target Organs: None.

HMIS Rating:

Health – 2 Flammability – 1 Physical Hazard – 1 PPE – User supplied

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

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4. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms develop.

Ingestion: Do not induce vomiting. If conscious, give 2-4 cupfuls of water or milk. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward. Get medical aid if irritation or symptoms appear.

Skin Contact: Remove any contaminated clothing. Rinse skin with water for at least 15 minutes. Get medical attention if irritation persists.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid if irritation develops.

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Not expected to be a fire hazard.

Auto-ignition Temperature: 510° C (950° F)

Flash Point: 130° C (266° F)

Flammable Limits: Lower Limit – 1.8 vol %, Upper Limit – 14.3 vol %

Products of Combustion: May decompose into irritating and highly toxic gases under fire conditions (carbon monoxide, carbon dioxide).

Specific Fire Hazards: As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear. Use water spray to keep fire exposed containers cool. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

Specific Explosion Hazards: No information available.

Fire Fighting Media: Use water, dry chemical, chemical foam, or alcohol-resistant foam.

National Fire Protective Association: Health - 2, Flammability - 1, Reactivity - 0

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

6. ACCIDENTAL RELEASE MEASURES

Absorb spilled liquid with sorbent pads, socks, or other inert material such as vermiculite, sand, or earth. Use spark-proof tools. Provide ventilation to the affected area and remove all ignition sources. Approach the spill from upwind and pick up absorbed material and place it in a suitable container. Always use proper personal protective equipment as described in section 8.

7. HANDLING AND STORAGE

Precautions: Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Ground or bond

containers before transferring material. Empty containers contain product residue (liquid and vapor) and can be dangerous. Use with adequate ventilation. Avoid breathing vapor or mist.

Storage: Store away from ignition sources. Keep in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or using the material should be equipped with eyewash station and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protection: Wear chemical splash goggles or other appropriate eye protection. Use butyl rubber gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Exposure Limits: None established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Clear, colorless, viscous liquid.

Odor: Weak odor

Molecular Formula: C₄H₆O₃

Molecular Weight: 102.09

Auto-ignition Temperature: 510° C (950° F)

Flash Point: 130° C (266° F)

Flammable Limits: Lower Limit – 1.8 vol %, Upper Limit – 14.3 vol %

pH: 7

Boiling Point: 242° C @ 760 mm Hg

Freezing/Melting Point: -48.8° C

Decomposition Temperature: 200° C.

Specific Gravity: 1.2069 g/cm³

Vapor Density (Air=1): >3.5

Vapor Pressure: 0.03 mm Hg @ 25° C.

Evaporation Rate (Butyl acetate = 1): Not available.

Viscosity: 2.8 mPas @ 20° C.

Solubility: Moderately soluble in water

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Excess heat, exposure to moisture.

Incompatibility With Various Substances: Acids and bases.

Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, skin absorption, skin contact

Acute Exposure Hazards:

INHALATION HAZARD: Low hazard for usual industrial handling. Inhalation of a mist of this material may cause respiratory tract irritation. Material has a low vapor pressure at room temperature, so exposure to vapor is not likely.

INGESTION HAZARD: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Low hazard for usual industrial handling.

SKIN CONTACT HAZARD: May cause mild skin irritation.

EYE CONTACT HAZARD: Causes eye irritation.

Chronic Exposure Hazards: No information found.

Animal Toxicity:

Draize test, rabbit, eye: 60 mg Moderate;

Draize test, rabbit, skin: 500 mg Moderate;

Inhalation, rat: LC50 = >5 gm/m³;

Oral, mouse: LD50 = 20700 mg/kg;

Oral, rat: LD50 = 29100 ug/kg;

Skin, rabbit: LD50 = >20 ml/kg;

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available

Environmental Fate: No information available.

13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Not regulated for transportation.

15. REGULATORY INFORMATION

US Federal Regulations:

CERCLA Hazardous Substances: CAS# 108-32-7 does not have a final RQ

SARA Section 302: CAS# 108-32-7: Does not have a TPQ

SARA Codes: CAS# 108-32-7 – acute

Section 313: Propylene Carbonate (CAS# 108-32-7) is not subject to SARA Title III Section 313 40 CFR 373 reporting requirements.

OSHA: Not considered highly hazardous by OSHA.

US State Regulations:

Components listed on state right-to-know lists for New Jersey and Pennsylvania.

California Prop 65: This product contains no chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Originally Prepared: 6/30/2006

Last Revised: 11/19/2014 – Revised hazard statements in Section 2 and incompatibilities with various substances in Section 10.

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