

Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 1 of 9

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Propylene Carbonate**

Other means of identification : None reported.

Recommended use of the chemical and restrictions on use

: Raw material ;Chemical intermediate.; Laboratory chemicals ;Processing aid;Lubricant
Use pattern: Professional Use Only
Restriction on use: None known

Chemical family

: Carbonic acid ester

Name, address, and telephone number
of the supplier:

Comet Chemical Company Ltd.

3463 Thomas Street
Innisfill, ON, Canada
L9S 3W4

Supplier's Telephone #

: (705) 436 5580

24 Hr. Emergency Tel #

: GFL Environmental - 1-888-772-2543

Name, address, and telephone number of
the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear yellow liquid. Odourless.

Most important hazards: Causes serious eye irritation.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Serious eye damage/eye irritation - Category 2A

Label elements

Hazard pictogram(s)



Signal Word

Warning!

Hazard statement(s)

Causes serious eye irritation.

Precautionary statement(s)

Wash thoroughly after handling.

Wear eye/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 2 of 9

SAFETY DATA SHEET**Other hazards**

Other hazards which do not result in classification:

Ingestion may cause irritation of the mouth, throat and stomach. Direct skin contact may cause slight or mild, transient irritation.

Environmental precautions:

Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Propylene carbonate	Carbonic acid cyclic methylethylene ester	108-32-7	>99

SECTION 4. FIRST-AID MEASURES**Description of first aid measures**

- Ingestion* : Do not induce vomiting. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.
- Inhalation* : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Call a POISON CENTER or doctor/physician if you feel unwell.
- Skin contact* : Wash affected areas with soap and water. Take off contaminated clothing and wash before re-use. Get medical attention if irritation develops and persists.
- Eye contact* : Flush with large amounts of water for 15 minutes. Remove contact lenses, if present and easy to do. If irritation or symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed

- : Causes serious eye irritation. Symptoms may include stinging, tearing, redness and swelling. Direct skin contact may cause temporary redness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES**Extinguishing media***Suitable extinguishing media*

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

- : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Carbon oxides

Special protective equipment and precautions for firefighters*Protective equipment for fire-fighters*

Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 3 of 9

SAFETY DATA SHEET

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. A full-body encapsulating chemical protective suit with positive pressure self-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

Special fire-fighting procedures

- : Evacuate personnel to safe areas. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Dike for water control. Avoid release to the environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up

- : Ventilate the area. Prevent further leakage or spillage if safe to do so. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.

Special spill response procedures

- : In Canada: For 24-hour emergency assistance, call: 1-613-996-6666 (CANUTEC).
US CERCLA Reportable quantity (RQ): None reportable.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use only outdoors or in a well-ventilated area. Wear suitable protective equipment. Avoid breathing mist or vapours. Avoid contact with skin, eyes and clothing. Keep away from heat and flame. Keep away from incompatibles. Label containers appropriately. Wash thoroughly after handling. Keep containers closed when not in use.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Incompatible materials : Strong oxidizers, acids and bases.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>			
<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u> <u>STEL</u>
Propylene carbonate	N/Av	N/Av	N/Av N/Av

Exposure controls

Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 4 of 9

SAFETY DATA SHEET

Ventilation and engineering measures

: Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below their respective threshold limit value.

Respiratory protection

: Respiratory protection is required if the concentrations exceed the TLV. Use a NIOSH approved dust respirator if dust levels exceed exposure limits. Seek advice from respiratory protection specialists.

Skin protection

: Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye / face protection

: Wear eye/face protection. Chemical goggles must be worn to prevent dusts from entering the eyes.

Other protective equipment

: An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Avoid breathing mist or vapours. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

: Liquid

Colour

: clear yellow

Odour

: Odorless.

Odour threshold

: No information available.

pH

: 7

Melting Point/Freezing point

: -49°C

Initial boiling point and boiling range

: 240°C

Flash point

: 116°C

Flashpoint (Method)

: Not applicable.

Evaporation rate (BuAe = 1)

: No information available.

Flammability

: Not applicable.

Lower explosion or flammability limit (% by vol.)

: 1.9%

Upper explosion or flammability limit (% by vol.)

: N/Ap

Oxidizing properties

: None known.

Explosive properties

: Not explosive

Vapour pressure

: 0.04-0.17 hPa @ 20°C

Relative vapour density

: (Air = 1) 3.52 @ 20°C

Relative density / Specific gravity

: 1.205g/cm³

Solubility in water

: Soluble (200g/l)

Other solubility(ies)

: No information available.

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: -0.5

Auto-ignition temperature

: 430°C

Decomposition temperature

: No information available.

Viscosity

: 2.76 mPas

Particle characteristics

: Not applicable.

Volatiles (% by weight)

: No information available.

Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 5 of 9

SAFETY DATA SHEET

Volatile organic Compounds (VOC's)

: No information available.

Absolute pressure of container

: N/Ap

Flame projection length

: N/Ap

Other physical/chemical comments

: None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: Hazardous polymerization does not occur.

Conditions to avoid : Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.

Incompatible materials : Strong oxidizers, acids and bases.

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption

: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: May cause respiratory tract irritation.

Sign and symptoms ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

: May cause mild skin irritation on prolonged contact.

Sign and symptoms eyes

: Causes serious eye irritation. Symptoms may include stinging, tearing, redness and swelling.

Potential Chronic Health Effects

: Prolonged exposure can cause redness, swelling, itching, cracking of the skin, dermatitis and sensitization.

Mutagenicity : Not expected to be mutagenic in humans.

Carcinogenicity : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: Not expected to have other reproductive effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : This material is not classified as hazardous under U.S. OSHA regulations (29 CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 6 of 9

SAFETY DATA SHEET

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

: No information available.

Toxicological data

: See below for toxicological data on the substance.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Propylene carbonate	N/Av	>5000 mg/kg	>5000mg/kg

Other important toxicological hazards

: See Section 3 for additional information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: Not expected to be harmful to aquatic organisms. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	<u>CAS #</u>	<u>Toxicity to Fish</u>		
		<u>LC₅₀ / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Propylene carbonate	108-32-7	>1000mg/L (common carp)	N/Av	None.

<u>Ingredients</u>	<u>CAS #</u>	<u>Toxicity to Daphnia</u>		
		<u>EC₅₀ / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Propylene carbonate	108-32-7	1000 mg/L (Daphnia magna)	N/Av	None.

<u>Ingredients</u>	<u>CAS #</u>	<u>Toxicity to Algae</u>		
		<u>EC₅₀ / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Propylene carbonate	108-32-7	>900 mg/L (Green algae)	>929mg/L (Green algae)	None.

Persistence and degradability

: Readily biodegradable

Bioaccumulation potential

: Not expected to bioaccumulate.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Propylene carbonate (CAS 108-32-7)	-0.5	3

Mobility in soil

: High water solubility indicates a high mobility in soil.



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Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 7 of 9

SAFETY DATA SHEET

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Empty containers may contain hazardous residues.
- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	None.	Not regulated.	not regulated	none	
TDG Additional information	None.				
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information	None.				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information	None.				

Special precautions for user : Appropriate advice on safety must accompany the package.

Environmental hazards : This substance does not meet the criteria for an environmentally hazardous substance according to the IMDG Code. See Section 12 for more environmental information.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Propylene Carbonate

SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 8 of 9

SAFETY DATA SHEET

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de Minimis Concentration
Propylene carbonate	108-32-7	Yes	N/Ap	N/Av	No	No

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Eye irritation.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Propylene carbonate	108-32-7	No	N/Ap	No	No	No	No	No	No

Canadian Information:

All ingredients are present on the DSL.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Propylene carbonate	108-32-7	203-572-1	Present	Present	(5)-524; (7)-737	KE-23785	Present	HSR003348

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Services
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 CNS: Central Nervous System
 COC: Cleveland Open Cup
 CSA: Canadian Standards Association
 DOT: Department of Transportation
 EPA: Environmental Protection Agency
 IARC: International Agency for Research on Cancer
 LC: Lethal Concentration
 LD: Lethal Dose
 N/Ap: Not Applicable
 N/Av: Not Available
 NIOSH: National Institute of Occupational Safety and Health
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 SARA: Superfund Amendments and Reauthorization Act
 STEL: Short Term Exposure Limit
 TLV: Threshold Limit Values
 TWA: Time Weighted Average

Propylene Carbonate
SDS Revision Date (mm/dd/yyyy): 11/12/2024

Page 9 of 9

SAFETY DATA SHEET

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices
2. ECHA - European Chemical Agency
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases
4. Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists
6. California Proposition 65 List
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal

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Revision Information

: 5. FIRE-FIGHTING MEASURES 9. PHYSICAL AND CHEMICAL PROPERTIES 15. REGULATORY INFORMATION

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Prepared for: Comet Chemical Company Ltd. 3463 Thomas Street Innisfill, ON L9S 3W4 Information (M-F 8:00-5:00): 705-436-5580 www.cometchemical.com	 COMET CHEMICAL COMPANY LTD.
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