

SAFETY DATA SHEET

Creation Date 26-October-2009 Revision Date 24-December-2021 **Revision Number 4**

1. Identification

Product Name Propylene carbonate

Cat No.: O4331-4

CAS-No 108-32-7

Synonyms PC; 1,2-Propanediol cyclic carbonate; 4-Methyl-1,3-dioxolan-2-one

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Importer/Distributor Manufacturer

Fisher Scientific Company Fisher Scientific One Reagent Lane 112 Colonnade Road. Fair Lawn, NJ 07410 Ottawa, ON K2E 7L6, Tel: (201) 796-7100

Canada

Tel: 1-800-234-7437

Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300

CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17) WHMIS 2015 Classification

Serious Eye Damage/Eye Irritation Category 2

Label Elements

Signal Word

Warning

Hazard Statements

Causes serious eye irritation



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling

Wear eye/face protection

Response

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

Disposal

Dispose of contents/container to an approved waste disposal plant

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Propylene carbonate	108-32-7	>95

4. First-aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists,

call a physician.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms/effects

Notes to Physician

None reasonably foreseeable.

Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point 116 °C / 240.8 °F

Method - No information available

Autoignition Temperature 430 °C / 806 °F

Explosion Limits

 Upper
 21 vol % @ 200°C

 Lower
 4.7 vol % @ 200°C

Sensitivity to Mechanical Impact No information available Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO2).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	1	N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment as required. Ensure adequate ventilation.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. **Up**

	7. Handling and storage
Handling	Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.
Storage.	Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Protect from moisture. Incompatible Materials. Strong oxidizing agents. Reducing Agent. Acids. Bases. Water. Peroxides.

8. Exposure controls / personal protection

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles

Hand Protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material Natural rubber Nitrile rubber Neoprene	Breakthrough time See manufacturers recommendations	Glove thickness -	Glove comments Splash protection only
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local

conditions under which the product is used, such as the danger of cuts, abrasion, gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Environmental exposure controls

No information available.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State Liquid Appearance Colorless

OdorNo information availableOdor ThresholdNo information available

pH 5.5-7.5

Melting Point/Range -49 °C / -56.2 °F

Boiling Point/Range 240 - 243 °C / 464 - 469.4 °F

Flash Point 116 °C / 240.8 °F
Evaporation Rate No information available

Flammability (solid,gas) Not applicable

Flammability or explosive limits

 Upper
 21 vol % @ 200°C

 Lower
 4.7 vol % @ 200°C

 Vapor Pressure
 0.04 mbar @ 20°C

Vapor Density3.52Specific Gravity1.204

Solubility

Partition coefficient; n-octanol/water

Autoignition Temperature

Pecomposition Temperature

Viscosity

Soluble in water

No data available

430 °C / 806 °F

No information available

2.8 mPa s @ 20°C

Molecular Formula C4 H6 O3
Molecular Weight 102.09

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Hygroscopic.

Conditions to Avoid Incompatible products. Excess heat. Exposure to moist air or water.

Incompatible Materials Strong oxidizing agents, Reducing Agent, Acids, Bases, Water, Peroxides

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO2)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	
Propylene carbonate	LD50 = 29000 mg/kg (Rat)	LD50 > 3000 mg/kg (Rabbit)	Not listed	

Toxicologically Synergistic

No information available

Products

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Propylene carbonate	108-32-7	Not listed				

Mutagenic Effects Not mutagenic in AMES Test

Reproductive Effects No information available.

No information available. **Developmental Effects**

Teratogenicity No information available.

STOT - single exposure None known STOT - repeated exposure None known

No information available **Aspiration hazard**

Symptoms / effects,both acute and No information available

delayed

Endocrine Disruptor Information No information available

The toxicological properties have not been fully investigated. **Other Adverse Effects**

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Propylene carbonate	EC50: > 500 mg/L, 72h (Desmodesmus subspicatus)	Leuciscus idus: LC50: 5300 mg/L/96h	EC50 > 10000 mg/L 17 h	EC50: > 500 mg/L, 48h (Daphnia magna)

Persistence and Degradability Persistence is unlikely

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Propylene carbonate	-0.5

13. Disposal considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and

national hazardous waste regulations to ensure complete and accurate classification.

	14. Transport information				
DOT	Not regulated				
DOT TDG	Not regulated				
IATA	Not regulated				
IMDG/IMO	Not regulated				
15. Regulatory information					

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA In notific Active-		EINECS	ELINCS	NLP
Propylene carbonate	108-32-7	Х	-	Х	ACT	IVE	203-572-1	-	-
Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Propylene carbonate	108-32-7	X	KE-23785	Х	X	Χ	X	X	Х

Legend:

X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
Propylene carbonate	Part 4 Substance		

Legend

NPRI - National Pollutant Release Inventory

Other International Regulations

Authorisation/Restrictions according to EU REACH

Component		REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	
Propylene carbonate	-	Use restricted. See item 75. (see link for restriction details)	-

https://echa.europa.eu/substances-restricted-under-reach

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Propylene carbonate	108-32-7	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Propylene carbonate	108-32-7	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

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Revision SummaryThis document has been updated to comply with the requirements of WHMIS 2015 to align

with the Globally Harmonised System (GHS) for the Classification and Labelling of

Chemicals.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS