SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

CAS Number: 616-38-6

Product Name: Dimethyl Carbonate

Revision Date: Aug 24, 2021 **Date Printed:** Dec 22, 2021

Version: 1.0 **Supersedes Date:** N.A.

Manufacturer's Name: Thames River Chemical Corp.

Address: 5230 Harvester Road Burlington, ON, CA, L7L 4X4

Emergency Phone: CHEMTREC (800) 424-9300

Information Phone Number: 905-681-5353

Fax: 905-681-5377

Product/Recommended Uses: For laboratory or industrial use only.

SECTION 2) HAZARDS IDENTIFICATION

Classification

Flammable Liquids - Category 2

Pictograms

Signal Word

Danger

Hazardous Statements - Physical

H225 - Highly flammable liquid and vapor

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 - Keep container tightly closed.

P240 - Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take action to prevent static discharges.

P280 - Wear protective gloves,protective clothing,eye protection/face protection.

Precautionary Statements - Response

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P370 + P378 - In case of fire: Use carbon dixoxide, alcohol foam, water spray or dry chemical to extinguish.

Precautionary Statements - Storage

P403 + P235 - Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal

P501 - Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000616-38-6	CARBONIC ACID, DIMETHYL ESTER	100% - 100%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality or to reflect batch to batch variation.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove to fresh air.If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Get Medical advice/attention if you feel unwell.

Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.
Consult a physician. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin Contact

Remove contaminated clothing and shoes. Wash affected areas with plenty of running water, preferably under a shower.Seek prompt medical attention. Get medical advice/attention. Wash contaminated clothing before reuse.

Ingestion

Do not induce vomiting without medical advice.Never give anything by mouth to an unconscious person.If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use dry chemical, CO2, water spray or alcohol resistant foam.

Unsuitable Extinguishing Media

Do not use direct water stream since this may cause fire to spread.

Specific Hazards in Case of Fire

Highly flammable liquid and vapor.Fire residues and contaminated water must be disposed of in accordance with local regulations. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Vapors may form explosive mixture with air.

Special Protective Actions

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Wear personal protection equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Keep unnecessary personnel away and upwind. Beware of vapors accumulated to form explosive concentrations. Remove all sources of ignition. Take precautionary measures against static discharge.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Absorb with inert materials and place into appropriate containers for disposal.Large spills should be collected mechanically (remove by pumping) for disposal.A vapor suppressing foam may be used to reduce vapors.Notify appropriate authorities and dispose of in accordance with applicable requirements.

SECTION 7) HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear personal protection equipment. Avoid contact with eyes, skin and clothing. Avoid ingestion and inhalation.Use only in well-ventilated area.Wash thoroughly after handling.
Empty containers retain product residue (liquid and/or vapor), and can be dangerous.Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to sources of ignition.
Ground and bond containers when transferring material to avoid static discharges. Use spark-proof tools and explosion-proof equipment.Take precautionary measures against static discharge.

7.2 Conditions for safe storage, including any incompatibilities

Store tightly closed container in a cool, dry, well-ventilated area. Keep isolated from incompatible materials.
Keep away from heat, sparks, flame and other sources of ignition.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134. In confined areas, use a self- contained breathing apparatus.

Appropriate Engineering Controls

Use adequate ventilation to keep airborne concentrations low.An emergency eye wash/shower must be readily accessible to the work area.

None of the chemicals in Section 3 are regulated under "ACGIH_carcinogen", "ACGIH_Notations", "ACGIH_TLV_Basis", "ACGIHsmg", "ACGIHsppm", "ACGIHtmg", "ACGIHtppm", "CAN_AL_Carcinogen", "CAN_AL_Notation", "CAN_ALsmg", "CAN_ALsppm", "CAN_ALtmg", "CAN_ALtppm", "CAN_ONsmg", "CAN_ONsppm", "CAN_ONtmg", "CAN_ONtppm", "CAN_QCVECDmg - CANADA_QUEBEC VALEUR D""EXPOSITION DE COURTE DURÉE_mg", "CAN_QCVECDppm - CANADA_QUEBEC VALEUR D"EXPOSITION DE COURTE DURÉE_ppm", "CAN_QCVEMPmg - CANADA_QUEBEC VALEUR D"EXPOSITION MOYENNE PONDÉRÉE_mg", "CAN_QCVEMPppm - CANADA_QUEBEC VALEUR D"EXPOSITION MOYENNE PONDÉRÉE_ppm", "CANsmg", "CANsppm", "CANtmg", "CANtppm", "OSHA_SkinDesignation", "OSHA_Tables_Z1_Z2_Z3", "OSHACarcinogen - OSHA Carcinogen", "OSHAsmg", "OSHAsppm", "OSHAtmg", "OSHAtppm"

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Density	1.00 g/l
Specific Gravity	1.000E-03

Appearance	Clear Liquid, Colorless
Odor Description	Pleasant
Odor Threshold	No data available
pH	No data available
Melting/Freezing Point	2 to 4
Low Boiling Point	90 °C at 760 mmHg
High Boiling Point	N/A
Flash Point	18.00
Vapor Pressure	5.3 kPa at 20 °C
Vapor Density	3.10
Evaporation Rate	No data available
Upper Explosion Level	12.87%(V)
Lower Explosion Level	4.22%(V)
Water Solubility	N/A
Coefficient Water/Oil	1/Log Pow: 0.23 at 20°C
Viscosity	No Data available

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions to Avoid

Avoid all possible sources of ignition, heat, sparks, flame, build up of static electricity and contact with incompatible materials.

Hazardous Reactions/Polymerization

Reacts violently with oxidants and potassium tert-butoxide causing fire hazard. The substance decomposes on burning producing irritating fumes.

Incompatible Materials

Strong oxidizing agents, potassium tert-butoxide.

Hazardous Decomposition Products

Oxides of carbon.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Route of Exposure

Inhalation: May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.
Skin Contact: No data available.
Eye Contact: May cause mild eye irritation.
Ingestion: May cause irritation of the digestive tract.

Acute Toxicity

Dermal LD 50 Rabbit > 5,000 mg/kg.
Inhalation LC 50 Rat > 140 mg/l.
Oral LD 50 Rat > 5,000 mg/kg.

The Acute Toxicity Estimate (ATE) for an oral exposure to this mixture is >5000 mg/kg body weight

The Acute Toxicity Estimate (ATE) for a dermal exposure to this mixture is >5000 mg/kg body weight

The Acute Toxicity Estimate (ATE) for an inhalation (vapour) exposure to this mixture is >20 mg/l

Aspiration Hazard

Not classified based on available information.

Carcinogenicity

This product is not classified as a carcinogen by IARC or U.S. ACGIH, NTP or OSHA

Germ Cell Mutagenicity

Not classified based on available information.

Reproductive Toxicity

Not classified based on available information.

Specific Target Organ Toxicity - Repeated Exposure

Not classified based on available information.

Specific Target Organ Toxicity - Single Exposure

Not classified based on available information.

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Fish: LC 50 Golden orfe > 100 mg/L 96 hours.
Aquatic invertebrates: EC 50 Daphnia magna > 100 mg/L 48 hours.
Aquatic plants: EC 50 Algae > 100 mg/L 72 hours.

Persistence and Degradability

Material is readily biodegradable.

Bioaccumulative Potential

Low potential for bioaccumulation.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Packaging: Empty containers may retain product residue, follow label warnings even after container is emptied.
Disposal: Dispose of according to Federal, State, and Local Regulations.

SECTION 14) TRANSPORT INFORMATION

	Transport Canada Information	U.S. DOT Information	IMDG Information	IATA Information
UN number:	UN1161	UN1161	UN1161	UN1161
Proper shipping name:	Dimethyl carbonate	Dimethyl carbonate	Dimethyl carbonate	Dimethyl carbonate

Hazard class:	3			
Hazard class:		3	3	3
Packaging group:	II	II	II	II
Hazardous substance (RQ):	No Data Available	No Data Available		
Marine Pollutant:	No Data Available	No Data Available	No Data Available	
Note / Special Provision:	No Data Available	No Data Available	No Data Available	No Data Available
Toxic-Inhalation Hazard:	No Data Available	No Data Available		

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000616-38-6	CARBONIC ACID, DIMETHYL ESTER	100% - 100%	DSL,TSCA,AICS,CN_IECSC - Inventory of Existing Chemical Substances Produced or Imported in China,EU_EINECS - European_EC_Inventory_EINECS,EU_EC_Inventory - European_EC_Inventory,PH_PICCS - Philippines, The Philippine Inventory of Chemicals and Chemical Substances,KR_KECI - Korean Existing Chemicals Inventory

SECTION 16) OTHER INFORMATION

Glossary

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service ; Chemtrec - Chemical Transportation Emergency Center; DSL - Domestic Substances List; ESL- Effects screening levels; GHS - "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations; HMIS - Hazardous Material Information Service; IATA - Dangerous Goods Regulations (DGR) for the air transport (IATA); IMDG - International Maritime Dangerous Goods Code; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OEL - Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL - Permissible Exposure Limit; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self Contained Breathing Apparatus; ppm - parts per million; STEL - Short-term exposure limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-weighted average; US DOT- US Department of Transportation.

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