

# Safety Data Sheet

According to 1907/2006/EC (REACH) and 1272/2008/EC (CLP)

Printing Date: 6/8/2015

Revision: 6/8/2015

**Trade Name: DIMETHYL CARBONATE (DMC)**

## 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade Name: DIMETHYL CARBONATE (DMC)

### 1.2 Article No.: DIMETHYL CARBONATE

### 1.3 Details of the supplier of the Safety Data Sheet Manufacturer/Supplier:

Elite Crete Systems  
1061 Transport Drive,  
Valparaiso, IN 46383  
Toll Free: 888.323.4445  
Tel: (219) 465-7671  
Fax: (219) 531-0898  
[www.elitecrete.com](http://www.elitecrete.com)

### 1.4 Emergency telephone number:

CHEMTREC US DOMESTIC: (800-424-9300)  
CHEMTREC INTERNATIONAL: (703-527-3887)  
CANUTEC, CA DOMESTIC: (613-996-6666)

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with CFR 1910 (OSHA HCS) and EU DIRECTIVES 67/548/EEC or 1999/45/EC**

Flammable liquids ( Category 2) H225

For full text of standards see SECTION 16

### 2.2 Label elements

**Labeling according to Regulation (EC) No 1272/2008:**

**Hazard pictograms:**



**GHS07    GHS02**

**Signal word:** Danger

#### **Hazard statements:**

Flammable

The product has to be labeled due to the calculation procedure of the 'General Classification guideline for preparations of the EU' in the latest valid version.

Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company data.

H225: Highly flammable liquid and vapor

H336: May cause drowsiness and dizziness.

#### **Precautionary statements:**

P210	Keep away from heat/sparks/open flames/hot surfaces.-No smoking
P233	Keep container tightly closed
P240	Ground container and receiving equipment
P241	Use explosion proof electrical/ventilating/lightning/equipment
P242	Use only non sparking tools
P243	Take precautionary measures against static discharge

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P280	Wear protective gloves, /clothing protection, eye protection, face mask protection and foot Protection
P303+P361+P353	IF ON SKIN (or hair): Remove/Takeoff immediately all contaminated clothing. Rinse skin with water (shower) THOROUGHLY AND CONTINUOUSLY UNTIL ALL RESIDUE IS FLUSHED OFF BODY
P370+P378	In case of fire Use Dry sand, dry chemical or alcohol-resistant foam for extinction
P403+P235	Store in a well ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant

### Hazard description:

Canadian WHMIS Classification: none listed

### NFPA (U.S.A.) ratings (scale 0 - 4)



Health = 1  
Fire = 3  
Reactivity = 0

Material is not flammable itself however reactions may liberate flammable hydrogen gas

### HMIS (U.S.A.) ratings (scale 0 - 4)

Health	1
Fire	3
Reactivity	0

Health = 1  
Fire = 3  
Reactivity = 0

### 2.3 Other hazards not otherwise classified (HNOC) or not covered by GHS

None known

## 3 Composition/information on ingredients

### 3.2 Mixture.

#### Hazardous components:

Identification #	Description	WT. %
CAS: #616-38-6	<b>Dimethyl carbonate</b>	75-100%
	GHS Symbols GHS02 flam. Liq. 2, H225	
	For full text see section 16	

Mixture of the substances above with non hazardous substances.

For the wording of the listed risk phases refer to section 16

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## 4 First aid measures



### 4.1 Description of first aid measures

#### After inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention immediately.

#### After skin contact:

Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

#### After eye contact:

If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention. Remove eye contacts if easy to do so. Seek medical attention immediately.

#### After swallowing:

If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. **Never induce vomiting** or give diluents.

Give large amounts of water or milk to a CONSCIOUS PERSON. **Never give (milk or water) to someone who is unconscious**, having convulsions, or who cannot swallow. Seek medical advice immediately.. Take a copy of the label and/or MSDS with the victim to the health professional.

### 4.2 Most important symptoms and effects, both acute and delayed.

**Acute:** This material may cause irritation to skin and eyes. Product may cause an allergic skin reaction.

**Chronic:** Prolonged or repeated skin contact may cause skin reaction product can be removed with water wash exposed skin thoroughly. Seek medical attention if symptoms arise. .

**Target Organs:**        **Acute:** Eye, Skin    lungs        **Chronic:** Skin, lungs

**Hazards:** Pre-existing skin or eye problems may be aggravated by exposure to this product.

### 4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptoms and reduce over-exposure.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** CO2, dry chemical, water spray, alcohol resistant foam.

### 5.2 Special hazards arising from the substance or mixture: no further relevant information available

**Hazardous decomposition products:** none known

**Flammability:** material is flammable

**Protective Equipment:** Firefighters should always wear NIOSH/MISHA approved self-contained breathing apparatus and full protective clothing.

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### 6 Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures:** Personnel should be trained for spill response operations.
- 6.2 Environmental precautions:** All work practices must be aimed at eliminating environmental contamination.
- 6.3 Methods and material for containment and cleaning up:** Evacuate area. Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up spilled material with an absorbent material and pick up and place in an appropriate waste container for disposal. Do not mix with other wastes. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

### 7 Handling and storage

- 7.1 Precautions for safe handling**  
keep away from heat, sparks, static charge build up and direct sunlight . Store in cool dry place in tightly sealed containers
- 7.2 Conditions for safe storage, including any incompatibilities:** Same as above  
**Storage:**  
**Requirements to be met by storerooms and receptacles:**  
Do not smoke, keep all ignition sources away. Protect against electrostatic charges. (keep grounded)
- 7.3 Specific end use(s):** No information

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## Additional

### 8 Exposure controls/personal protection

#### information about design of technical facilities:

Use with adequate explosion proof ventilation to ensure low vapor levels are maintained. Ensure eyewash/safety shower stations are available near areas where this product is used.

#### 8.1 Control parameters

##### Ingredients with limit values that require monitoring at the workplace:

Dimethyl Carbonate:

**ACGIH TLV-TWA N.D.**

**ACGIH-TLV STEL N.D.**

**OSHA PEL-TWA N.D.**

**OSHA- PEL CEILING N.D.**

#### 8.2 Exposure controls

##### Personal protective equipment:

##### General protective and hygienic measures:

*The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.*

**Respiratory protection:** Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.



Protective boots

**Protection of hands & feet:** Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

Protective gloves,



##### Material of gloves:

The selection of suitable gloves does not only depend on the material, but also on the quality, and varies from manufacturer to manufacturer.

##### Penetration time of glove material:

The exact break through time has to be determined by the manufacturer of the protective gloves. DO NOT exceed the breakthrough time set by the Manufacturer.

**Eye protection:** full chemical face mask as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.



Tightly sealed goggles



Chemical face mask

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### Body Protection:

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

Exposure guidelines:

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

Form:	Liquid (fluid)
Color:	Clear transparent
Odor:	Characteristic/Typical
Odor threshold:	N/A

pH-value:	N/A
<b>Change in condition</b>	
Melting point/Melting range:	36-39°F (2-4°C)
Boiling point/Boiling range:	194°F (90°C)
Flash point:	65°F (17°C)
Flammability (solid, gaseous):	Flammable
Ignition temperature:	No data available
Decomposition temperature:	No data available
Self-igniting:	Product is not selfigniting
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixture is possible
<b>Explosion limits</b>	
Lower:	4.22 Vol %
Upper:	12.87 Vol. %
Vapor pressure at: 100°F (37.8°C)	96 hPa (72mm Hg)
70°F (21.2°C)	24 hPa (18mm Hg)
Density at 68°F (20°C):	specific gravity 1.068 g//cm <sup>3</sup>
Solubility in / Miscibility with Water:	Fully miscible
Viscosity:	No data available
Dynamic:	No data available
Kinematic:	
Solvent content:	
VOC	0.0%
9.2 Other information	

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#### 10 Stability and reactivity

**10.1 Reactivity:** chemically stable

**10.2 Chemical stability:** Product is stable if used according to specifications

**10.3 Possibility of hazardous reactions:** vapors may form explosive mixture in air

**10.4 Conditions to avoid:** heat, sparks, flames, extremes of temperature and direct sunlight

**10.5 Incompatible materials:** Oxidizing agents, strong acids, strong bases

**10.6 Hazardous decomposition products:** Toxic gasses/fumes are given off during burning or thermal decomposition. During combustion carbon monoxide may be formed. During combustion carbon dioxide may be formed,

#### 11 Toxicological information



**EFFECTS OF OVEREXPOSURE - INHALATION:** Breathing in the material may irritate the mucous membranes of the nose, throat bronchi and lungs. May be irritating to the respiratory system.

**EFFECTS OF OVEREXPOSURE - SKIN CONTACT:** May cause skin irritation. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

**EFFECTS OF OVEREXPOSURE - EYE CONTACT:** May cause eye irritation.

**EFFECTS OF OVEREXPOSURE - INGESTION:** Ingestion may cause gastrointestinal tract irritation.

**EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS:** No Information

**Primary Route(s) of Entry:** Eye Contact, Ingestion, Inhalation, Skin Contact.

##### Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No. Name according to EEC Oral LD50, mg/kg Dermal LD50, mg/kg Vapor LC50, mg/L

616-38-6 Dimethyl carbonate 13000.0 N.D. N.D.

#### 12 Ecological information

No information

#### 13 Disposal considerations



##### 13.1 Waste treatment methods

For more guidance and information contact our Waste Services Division at (262) 658-4000.

Always dispose of any waste in accordance with all local, state, and federal regulations.

**DISPOSAL METHOD:** Dispose of waste in accordance with all local, state and federal regulations.

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Wear appropriate personal protective equipment.

Exposure Controls / Personal Protection Section.)Eliminate all ignition sources. Evacuate unnecessary personnel. Prevent additional discharge of material if able to do so safely. Do not touch or walk through spilled material. Avoid runoff into storm sewers

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and ditches which lead to waterways. Ventilate spill area. Stay upwind of spill. Collect spilled materials for disposal. Use only noncombustible

material for clean-up. Use clean, non-sparking tools to collect absorbed materials. Absorb spill with inert material (e.g.

dry sand or earth), then place in a chemical waste container.

**RCRA WASTE CODE:** None Listed

**EU WASTE CODE:** Not Listed

**Cleansing agent:** Water with cleaning agents .

### 14 Transport information

#### 14.1 UN-Number

DOT: IMDG: ADR, , IATA, TDG: UN 1161  
ADR: RID UN 1161

#### 14.2 UN proper shipping name

DOT, IMDG, IATA:TDG Dimethyl Carbonate  
RID/ADR Dimethyl carbonate

#### 14.3 Transport hazard class(es)

DOT;; IMDG; IATA: ICAO 3  
Class:  
Label:



ADR: RID  
Class: 3  
Label:



#### 14.4 Packing group

DOT, ADR, IMDG, IATA:TDG: RID II

#### 14.5 Environmental hazards:

Marine pollutant: No

#### 14.6 Special precautions for user

Warning corrosive substances  
Danger code (Kemler): 30  
EMS Number: F-E,S-D  
Segregation group: Dimethyl carbonate

#### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

No data available

#### Transport/Additional information

ADR WARNING FLAMMABLE LIQUIDS



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Limited quantities (LQ)  
Excepted quantities (EQ)

Transport category: **WARNING FLAMMABLE LIQUIDS**  
Tunnel restriction code:

UN "Model Regulation": **UN 1161**

### 15 Regulatory information

#### U.S. Federal Regulations:

##### CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the

Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to

meet the following categories:

Fire Hazard, Acute Health Hazard

##### SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the

Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

##### TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from

the United States:

No TSCA components exist in this product.

#### U.S. State Regulations:

##### NEW JERSEY RIGHT-TO-KNOW:

The following materials are non-hazardous, but are among the top five components in this product

No NJ Right-To-Know components exist in this product.

##### PENNSYLVANIA RIGHT-TO-KNOW

The following non-hazardous ingredients are present in the product are at or greater than 3%.

No PA Right-To-Know components exist in this product.

##### CALIFORNIA PROPOSITION 65 CARCINOGENS

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

No Proposition 65 Carcinogens exist in this product.

##### CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

No Proposition 65 Reproductive Toxins exist in this product.

#### International Regulations: As follows -

##### CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class: No Information

### 16 Other information

#### Hazard Statements:

H226: Flammable liquid and vapor.

H336: May cause drowsiness and dizziness.

H413: May cause long lasting harmful effects to aquatic life.

#### Precautionary statements:

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P202	Do not handle until all safety precautions have been read and understood
P260	Do not breath dust/fumes/gas/mist/vapors/spray
P264	Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P280	Wear protective gloves, /clothing protection, eye protection, face mask protection and foot Protection
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353	IF ON SKIN (or hair): Remove/Takeoff immediately all contaminated clothing. Rinse skin with water (shower) THOROUGHLY AND CONTINUOUSLY UNTIL ALL RESIDUE IS FLUSHED OFF BODY
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P309+P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician
P501	Dispose of contents/container to an approved waste disposal plant

#### Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation.

IATA: International Air Transport Association.

ACGIH: American Conference of Governmental Industrial Hygienists.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

NFPA: National Fire Protection Association (USA).

HMIS: Hazardous Materials Identification System (USA).

LC50: Lethal concentration, 50 percent.

LD50: Lethal dose, 50 percent.