

### Description

The 9610 *Dimethyl Carbonate* is a fast evaporating, low toxicity, flammable solvent that is VOC exempt under Canadian and USA regulations. It is often used to replace esters, glycol ethers and ketones in formulation to help reduce the VOC emission. It can be found in paints, coatings, and inks as a feasible replacement for xylenes, ethyl acetate, butyl acetate, butanone, and toluene.

### Applications & Usages

Dimethyl carbonate is used a low toxicity and high biodegradability methylating agent, carbonylating agent, methoxylating agent and methylolating agent. It is also used in thinners and cleaners for paints, coating inks with resins that are typically soluble in glycol ether type solvents.

### Benefits and Features

- **Fast evaporation rate**
- **Highly miscible with other common organic solvents**
- **Compatible with most substrates used in electronic parts and enclosures**

### Principal Components

Name	CAS Number
Dimethyl carbonate	616-38-6

### Storage Parameters

Properties	Value
Shelf Life @23 °C [73 °F]	5 y
Storage Temperature <sup>a)</sup>	-20 to 40 °C [32 to 104 °F]

a) Storage below zero is not necessary. Cool, dry, and well ventilated area is recommended.

### Properties

Physical Property	Method	Value
Color		Clear
Odor		Characteristic
Density @25 °C [77 °F]		1.06 g/mL
Viscosity @25 °C [77 °F]		0.7 cP
Flash Point	Tag Closed Cup	14 °C [58 °F]
Freezing Point		2 °C [36 °F]
Boiling Point		90 °C [194 °F]
Vapor Pressure @20 °C [68 °F]		24 hPa [18 mmHg]
Evaporation Rate		3.2 (ButAc=1)
Volatile Organic Compound (VOC)		0% [0 g/mL], VOC exempted
MIR value		0.63

<i>Solubility Parameters</i>		<i>Value</i>
Solubility in water		Partially Soluble
Hansen Solubility Parameters <sup>a)</sup> (cal/cm <sup>3</sup> ) <sup>1/2</sup> ; [MPa] <sup>1/2</sup>	Total	9.9 [20.3]
	<i>Non-Polar</i>	8.5 [17.4]
	<i>Polar</i>	4.7 [9.6]
	<i>Hydrogen Bonding</i>	1.9 [3.9]

a) Hansen parameters calculate using component literature values and volume fraction composition.

## Compatibility

**Substrate Compatibility:** The 9610 is compatible with most substrate materials found on printed circuit assemblies.

**Solvent Miscibility:** The 9610 is highly miscible with other common organic solvent. It can be mixed with

- Aldehydes
- Aromatic and Aliphatic Hydrocarbons
- Ethers
- Glycols
- Glycol Ethers
- Ketones

## Health, Safety, and Environmental Awareness

Please see the 9610 **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

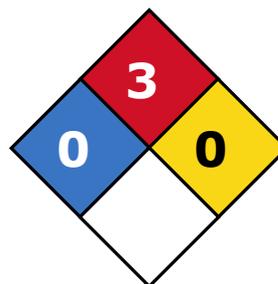
**Environmental Impact:** The 9610 is VOC (Volatile Organic Compound) exempted in Canada and the USA. It is RoHS compliant.

**Health and Safety:** This liquid is highly flammable and should be kept away from flames and other ignition sources. Avoid breathing in fumes or direct contact with the material.

### HMIS® RATING

<b>HEALTH:</b>	* <b>0</b>
<b>FLAMMABILITY:</b>	<b>3</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

### NFPA® 704 CODES



*Approximate HMIS and NFPA Risk Ratings Legend:*

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

### Thinning Instructions

Make necessary adjustments according to your paint and spray gun equipment usage instructions. A 1.0 (paint):1.0 (thinner) dilution is a common starting point. If sagging is observed, reduce the thinner ratio.

### Packaging and Supporting Products

<i>Cat. No.</i>	<i>Packaging</i>	<i>Net Volume</i>		<i>Net Weight</i>	
<b>9610-1L</b>	Can	945 mL	31.9 fl oz	1.0 kg	2.2 lb
<b>9610-4L</b>	Can	3.78 L	1 gal	3.4 kg	7.51 lb

Contact MG Chemicals if custom packaging or sizes are required

### Technical Support

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at [www.mgchemicals.com](http://www.mgchemicals.com).

Email: [support@mgchemicals.com](mailto:support@mgchemicals.com)

Phone: +(1) 800-340-0772 (Canada, Mexico & USA)  
+(1) 905-331-1396 (International)

Fax: +(1) 905-331-2862 or +(1) 800-340-0773

Mailing address: **Manufacturing & Support**  
1210 Corporate Drive  
Burlington, Ontario, Canada  
L7L 5R6

**Head Office**  
9347-193rd Street  
Surrey, British Columbia, Canada  
V4N 4E7

### Warranty

*M.G. Chemicals Ltd.* warrants this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

### Disclaimer

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