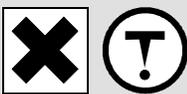


# Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Combustible material; avoid heat and sources of ignition. Harmful compound, minimize exposure. Irritating to skin, eyes, and the respiratory system. <b>POSSIBLE CARCINOGEN. MINIMIZE EXPOSURE.</b>	

## Section I. Chemical Product and Company Identification

Chemical Name	<b>Vinylene Carbonate</b> (stabilized with HQ)		
Catalog Number	V0015	Supplier	TCI America 9211 N. Harborgate St. Portland OR 1-800-423-8616
Synonym	Carbonic acid cyclic vinyl ester; 1,3-Dioxol-2-one		
Chemical Formula	C <sub>3</sub> H <sub>2</sub> O <sub>3</sub>		
CAS Number	872-36-6	<div style="border: 2px dashed black; padding: 5px;">                     In case of                      Emergency                      Call <b>Chemtrec®</b>  <b>(800) 424-9300 (U.S.)</b>  <b>(703) 527-3887 (International)</b> </div>	

## Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Vinylene Carbonate <small>(stabilized with HQ)</small>	872-36-6	Min. 97.0 (GC)	This chemical is classified as a possible carcinogen. There is no acceptable exposure limit for a carcinogen.	Not available.

## Section III. Hazards Identification

Acute Health Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	<b>CARCINOGENIC EFFECTS</b> : Rat (subcutaneous) 1760 mg/kg/44W-I. Caused tumors at site of application. <b>MUTAGENIC EFFECTS</b> : Not available. <b>TERATOGENIC EFFECTS</b> : Not available. <b>DEVELOPMENTAL TOXICITY</b> : Not available. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

## Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. DO NOT use an eye ointment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention. Treat symptomatically and supportively.
Skin Contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.
Inhalation	If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt, or waistband. If the victim is not breathing, administer artificial respiration. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

## Section V. Fire and Explosion Data

Flammability	Combustible.	Auto-Ignition	Not available.
Flash Points	72°C (161.6°F)	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO <sub>2</sub> ).		
Fire Hazards	No specific information is available regarding the flammability of this compound in the presence of various materials.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. No additional information is available regarding the risks of explosion.		

Continued on Next Page

Emergency phone number (800) 424-9300

(stabilized with HQ)

Fire Fighting Media  
and InstructionsSMALL FIRE: Use DRY chemicals, CO<sub>2</sub>, water spray or foam.  
LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.**Section VI. Accidental Release Measures**Spill Cleanup  
Instructions

Combustible material. Harmful material. Irritating material.  
Keep away from heat and sources of ignition. Mechanical exhaust required. Stop leak if without risk. If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Consult federal, state, and/or local authorities for assistance on disposal.

**Section VII. Handling and Storage**Handling and Storage  
Information

COMBUSTIBLE. HARMFUL. IRRITANT. POSSIBLE CARCINOGEN. Keep away from heat and sources of ignition. Mechanical exhaust required. Avoid excessive heat and light. Do not breathe gas, fumes, vapor or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Treat symptomatically and supportively. Avoid contact with skin and eyes.  
Always store away from incompatible compounds such as oxidizing agents, reducing agents, acids, alkalis (bases).

**Section VIII. Exposure Controls/Personal Protection**

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protection

Splash goggles. Lab coat. Vapor respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Exposure Limits

This chemical is classified as a possible carcinogen. There is no acceptable exposure limit for a carcinogen.

**Section IX. Physical and Chemical Properties**

Physical state @ 20°C	Colorless to faint yellow liquid.	Solubility	Not available.
Specific Gravity	1.355		
Molecular Weight	86.05	Partition Coefficient	Not available.
Boiling Point	162°C (323.6°F)	Vapor Pressure	Not available.
Melting Point	22°C (71.6°F)	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

**Section X. Stability and Reactivity Data**

Stability

This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability

Refrigerate. Avoid excessive heat and light.

Incompatibilities

Reactive with oxidizing agents, reducing agents, acids, alkalis (bases).

**Section XI. Toxicological Information**

RTECS Number

FG3325000

Routes of Exposure

Ingestion. Inhalation. Eye contact. Skin contact.

Toxicity Data

Not available.

Chronic Toxic Effects

**CARCINOGENIC EFFECTS** : Rat (subcutaneous) 1760 mg/kg/44W-I. Caused tumors at site of application.  
**MUTAGENIC EFFECTS** : Not available.  
**TERATOGENIC EFFECTS** : Not available.  
**DEVELOPMENTAL TOXICITY** Not available.  
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic Effects

Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

**Section XII. Ecological Information**

Ecotoxicity Not available.

Environmental Fate Not available.

**Section XIII. Disposal Considerations**

Waste Disposal Recycle to process, if possible. Consult your local or regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state, and local regulations when disposing of this substance.

**Section XIV. Transport Information**

DOT Classification Not a DOT controlled material (United States).

PIN Number Not applicable.

Proper Shipping Name Not applicable.

Packing Group (PG) Not applicable.

DOT Pictograms

**Section XV. Other Regulatory Information and Pictograms**

TSCA Chemical Inventory (EPA) This product is **NOT** on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list:  
 (i) These products are supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720.0 et sec.  
 (ii) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on an MSDS sheet.

WHMIS Classification (Canada) WHMIS CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

EINECS Number (EEC) 212-825-5

EEC Risk Statements R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.  
 R36/37/38- Irritating to eyes, respiratory system and skin.

Japanese Regulatory Data Not available.

**Section XVI. Other Information**

Version 1.0  
 Validated on 10/23/1998.  
 Printed 2/23/2005.

**Notice to Reader**

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.