

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 6.4

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Vinylene carbonate

Product Number : 809977

Brand : Aldrich

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 872-36-6

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Dermal (Category 3), H311

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Skin sensitization (Category 1), H317

Specific target organ toxicity - repeated exposure, Oral (Category 2), Liver, Stomach, H373

Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.



## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H373 May cause damage to organs (Liver, Stomach) through prolonged or repeated exposure if swallowed.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
P314 Get medical advice/ attention if you feel unwell.

Supplemental Hazard Statements

none

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : 1,3-Dioxol-2-one  
VC

Formula : C<sub>3</sub>H<sub>2</sub>O<sub>3</sub>  
Molecular weight : 86,05 g/mol  
CAS-No. : 872-36-6  
EC-No. : 212-825-5

| Component               | Classification                                                                                     | Concentration |
|-------------------------|----------------------------------------------------------------------------------------------------|---------------|
| <b>1,3-Dioxol-2-one</b> |                                                                                                    |               |
|                         | Acute Tox. 4; Acute Tox. 3; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; STOT RE 2; Aquatic Chronic 2; | <= 100 %      |



|  |                                          |  |
|--|------------------------------------------|--|
|  | H302, H311, H315, H318, H317, H373, H411 |  |
|--|------------------------------------------|--|

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.



For personal protection see section 8.

## **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## **6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

## **6.4 Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Air-, heat-, and moisture-sensitive. strongly hygroscopic Light sensitive. Handle and store under inert gas.

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Ingredients with workplace control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### **Personal protective equipment**

##### **Eye/face protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.



The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

### **Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

|                                                 |                                                                           |
|-------------------------------------------------|---------------------------------------------------------------------------|
| a) Appearance                                   | Form: liquid<br>Color: light yellow                                       |
| b) Odor                                         | No data available                                                         |
| c) Odor Threshold                               | No data available                                                         |
| d) pH                                           | No data available                                                         |
| e) Melting point/freezing point                 | Melting point/freezing point: 15 °C at 1010 hPa - OECD Test Guideline 102 |
| f) Initial boiling point and boiling range      | 168 °C                                                                    |
| g) Flash point                                  | 80 °C - closed cup                                                        |
| h) Evaporation rate                             | No data available                                                         |
| i) Flammability (solid, gas)                    | No data available                                                         |
| j) Upper/lower flammability or explosive limits | No data available                                                         |
| k) Vapor pressure                               | No data available                                                         |
| l) Vapor density                                | No data available                                                         |
| m) Relative density                             | 1,4 g/cm <sup>3</sup>                                                     |
| n) Water solubility                             | 515 g/l at 20,2 °C - OECD Test Guideline 105 - soluble                    |
| o) Partition coefficient: n-octanol/water       | log Pow: -0,36 at 20 °C                                                   |
| p) Autoignition temperature                     | 355 °C<br>at 1.007,3 - 1.013 hPa                                          |



- |                              |                   |
|------------------------------|-------------------|
| q) Decomposition temperature | No data available |
| r) Viscosity                 | No data available |
| s) Explosive properties      | No data available |
| t) Oxidizing properties      | No data available |

## 9.2 Other safety information

Surface tension 73,4 mN/m at 19,9 °C

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - > 300 - < 500 mg/kg

(Directive 67/548/EEC, Annex V, B.1.)

LD50 Dermal - Rat - male and female - > 200 - < 2.000 mg/kg

(Directive 67/548/EEC, Annex V, B.3.)

#### Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes. - 24 h

(OECD Test Guideline 405)

#### Respiratory or skin sensitization

- Mouse



Result: May cause sensitization by skin contact.

### **Germ cell mutagenicity**

Ames test

E. coli

Result: negative

Micronucleus test

Mouse - male

Result: negative

### **Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

Ingestion - May cause damage to organs through prolonged or repeated exposure. - Liver, Stomach

### **Aspiration hazard**

No data available

### **Additional Information**

RTECS: FG3325000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## **SECTION 12: Ecological information**

### **12.1 Toxicity**

|                                                     |                                                                                                                 |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | mortality LC50 - Cyprinus carpio (Carp) - 2,4 mg/l - 96 h<br>(OECD Test Guideline 203)                          |
| Toxicity to daphnia and other aquatic invertebrates | Immobilization EC50 - Daphnia magna (Water flea) - 4,9 mg/l - 48 h<br>(OECD Test Guideline 202)                 |
| Toxicity to algae                                   | static test EC50 - Pseudokirchneriella subcapitata (green algae) - 3,2 mg/l - 96 h<br>(OECD Test Guideline 201) |
| Toxicity to bacteria                                | EC50 - Sludge Treatment - 100 mg/l - 3 h                                                                        |

### **12.2 Persistence and degradability**

|                  |                                                                                                        |
|------------------|--------------------------------------------------------------------------------------------------------|
| Biodegradability | aerobic - Exposure time 28 d<br>Result: 22 % - Not rapidly biodegradable<br>(OECD Test Guideline 301D) |
|------------------|--------------------------------------------------------------------------------------------------------|



### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Toxic to aquatic life with long lasting effects.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2810

IMDG: 2810

IATA: 2810

### 14.2 UN proper shipping name

ADR/RID: TOXIC LIQUID, ORGANIC, N.O.S. (1,3-Dioxol-2-one)

IMDG: TOXIC LIQUID, ORGANIC, N.O.S. (1,3-Dioxol-2-one)

IATA: Toxic liquid, organic, n.o.s. (1,3-Dioxol-2-one)

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

### 14.6 Special precautions for user

No data available

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## SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

REACH - Restrictions on the manufacture, :  
placing on the market and use of certain





dangerous substances, preparations and articles  
(Annex XVII)

## 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

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## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

|      |                                                                                 |
|------|---------------------------------------------------------------------------------|
| H302 | Harmful if swallowed.                                                           |
| H311 | Toxic in contact with skin.                                                     |
| H315 | Causes skin irritation.                                                         |
| H317 | May cause an allergic skin reaction.                                            |
| H318 | Causes serious eye damage.                                                      |
| H373 | May cause damage to organs through prolonged or repeated exposure if swallowed. |
| H411 | Toxic to aquatic life with long lasting effects.                                |

### Further information

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