



CHUANG XIN

福建创鑫科技开发有限公司

FUJIAN CHUANG XIN SCIENCE AND DEVELOPS CO., LTD.

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MATERIAL SAFETY DATA SHEET

Section 1. Product and company information

Product Name : 1,3-Dioxol-2-one (99.5%)

Synonyms : Vinylene carbonate (VC)

Company : FuJian Chuangxin Science and Develops Co.,Ltd.

Phone : +86-591-83704867

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Section 2. Composition/information on ingredients

Formula : $C_3H_2O_3$

Molecular Weight : 86.05 g/mol

CAS-No. : 872-36-6

Section 3. Hazards summarizing

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 sensitisation (Category 1), H317

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

Chronic aquatic toxicity (Category 2), H411

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Toxic, Dangerous for the environment, Harmful, Irritant

R22, R24, R38, R41, R43, R48/22, R51/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

Section 4. First aid measures

General advice

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

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

Section 5. Fire-fighting measures

Suitable extinguishing media

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

Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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.

Reference to other sections

For disposal see section 13.

Section 7. Handling and storage

Precautions for safe handling

Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent

the build up of electrostatic charge.

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.

Recommended storage temperature: 2 - 8 °C

Store under inert gas. Moisture sensitive. Heat sensitive.

Section 8. Exposure controls/personal protection

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 EU Directive 89/686/EEC 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).

Section 9. Physical and chemical properties

Appearance

Appearance Form: liquid

Colour: light yellow

Safety data

pH value : no data available

Melting point : 15 °C

Boiling point : 162 °C

Flash point : 83.3 °C - closed cup

Auto-ignition temperature : 355 °C

Lower explosive limits : no data available

Upper explosive limits no data available

Water solubility : 515 g/l at 20,2 °C

Vapour pressure : no data available

Vapour density : no data available

Relative density : 1,355 g/mL at 25 °C

Partition coefficient (noctanol/water) : -0.36

Decomposition temperature : no data available

Viscosity : no data available

Explosive properties : no data available

Oxidizing properties : no data available

Section 10. Stability and reactivity

Reactivity

no data available

Chemical stability

no data available

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

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

Hazardous decomposition products

Other decomposition products - no data available

Section 11. Toxicological information

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

Respiratory or skin sensitisation

- mouse

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Ames test

E. coli

Result: negative

Micronucleus test

mouse - male

Result: negative

Carcinogenicity

Carcinogenicity - rat - Subcutaneous

Tumorigenic:Neoplastic by RTECS criteria. Tumorigenic:Tumors at site or application.

IARC: No component 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: Not available

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

Section 12. Ecological information

Toxicity

Toxicity to fish mortality LC50 - Cyprinus carpio (Carp) - 2,4 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

Immobilization EC50 - Daphnia magna (Water flea) - 4,9 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (green algae) - 3,2 mg/l - 96h
(OECD Test Guideline 201)

Toxicity to bacteria EC50 - Sludge Treatment - 100 mg/l - 3 h

Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 22 % - not rapidly biodegradable
(OECD Test Guideline 301D)

Bioaccumulative potential

no data available

Mobility in soil

no data available

Section 13. Disposal considerations

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.

Section 14. Transport information



UN number

ADR/RID: - IMDG: - IATA: -

UN proper shipping name

ADR/RID: TOXIC LIQUID, ORGANIC, N.O.S. (Vinylene carbonate)

IMDG: TOXIC LIQUID, ORGANIC, N.O.S. (Vinylene carbonate)

IATA: Toxic liquid, organic, n.o.s. (Vinylene carbonate)

Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

Packaging group

ADR/RID: III IMDG: III IATA: III

Environmental hazards

ADR/RID: yes IMDG Marine Pollutant: yes IATA: no

Special precautions for user

no data available

Section 15. Regulatory information

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

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Fujian Chuangxin Science and Develops Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.