

## Safety data sheet

Issue Date: 2022-10-09

According to GB/T 16483、GB/T 17519

Version:1.0

SDS Record Number: Synvent-002

### Fluoroethylene carbonate

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

##### 1.1 Product identifier

Product Name: Fluoroethylene carbonate

Product Code: 1301

CAS No. : 114435-02-8

##### 1.2 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Synvent Materials Corporation

Address: 13-03C Block A,Hengfeng Building,No.335 Yingbin Road,Guangrao County

Dongying City,Shandong,China

Zip: 257300

Tel: 0546-2169970

Fax: 0546-2169970

E-mail: wpyx@synventgroup.com

##### 1.3 Emergency telephone number

Tel: 0546-2169111

##### 1.4 Relevant identified uses of the substance or mixture and uses advised against

Recommended uses: For R&amp;D purposes only.

Uses advised against: Not for pharmaceutical, domestic or other purposes.

#### SECTION 2: Hazards identification

##### Emergency overview

*Harmful if swallowed.Causes skin irritation.May cause an allergic skin reaction.Causes serious eye irritation.Show this safety data sheet to the doctor in attendance.If breathed in, move person into fresh air.If not breathing, give artificial respiration. Consult a physician.Wash off with soap and plenty of water. Consult a physician.Rinse cautiously with plenty of water for at least 15 minutes and consult a physician.Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.*

## 2.1 Classification of the substance or mixture

H302	Acute toxicity,oral. Category 4
H315	Skin corrosion/irritation. Category 2
H317	Sensitisation,skin. Category 1
H319	Serious eye damage/eye irritation. Category 2A

Refer to Section 16 for the full text of the Health Instructions (H -) mentioned in this section.

## 2.2 GHS Label elements, including precautionary statements

### Hazard pictograms:



**Signal word** Warning

### Hazard statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

### Precautionary statement(s)

#### Prevention

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat,drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

#### Response

P301+P312+P330	IF SWALLOWED: Call a POISON CENTER/doctor/... if you feel unwell.Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.

**Disposal**

P501 Disposal of contents / containers to approved waste treatment plants.

**2.3 Physical and Chemical Hazards**

Data not available

**2.4 Health Hazards**

H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.

**2.5 Environmental Hazards**

Data not available

**2.6 Other Hazards**

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**SECTION 3: Composition/information on ingredients****Substance/mixture: substance****3.1 Substance**

Synonyms: 4-Fluoro-1,3-dioxolane-2-one, FEC

Molecular weight: 106.05g/mol

CAS No.: 114435-02-8

EC No.: 483-360-5

Component	Concentration(or range)	Classification
Dioxolane-1,3, 4-fluoro-, 2-oxo	≤100%	H302 Acute toxicity,oral. Category 4
		H315 Skin corrosion/irritation. Category 2
		H317 Sensitisation,skin. Category 1
		H319 Serious eye damage/eye irritation. Category 2A

Refer to Section 16 for the full text of the Health Instructions (H -) mentioned in this section.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General description**

Consult a doctor. Show the safety technical manual to the doctor at the scene.

**If Inhaled**

If inhaled, please move the patient to fresh air. If breathing is stopped, artificial respiration is carried out. Consult a doctor.

**In case of skin contact**

Immediately remove any clothing soiled by the product. Wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

**In case of eye contact**

Rinse opened eye for at least 15 minutes under running water/saline. Consult a doctor.

**If swallowed**

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 label (see label 2.2).

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

No data available.

**4.4 Notes to Physician**

No data available.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Extinguishing method and extinguishing media: use water mist, foam, dry powder or carbon.

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

Carbon oxides,  
Hydrogen fluoride.

**5.3 Special protective actions and precautions for firefighters**

Wear full body protective clothing with breathing apparatus. Fire-extinguishing work is done from the windward.

Move containers from the fire site to the open space if safe to do.

If the container in the fire site has changed color or made a noise from the safety relief device, it must be evacuated immediately.

Isolate the accident site and prohibit irrelevant personnel from entering.

Collect and treat fire water to prevent environmental pollution.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust. See Section 8 for personal protection.

**6.2 Environmental precautions**

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

### 6.3 Methods and material for containment and cleaning up

Avoid producing dust. Sweep up and shovel into suitable containers for disposal.

### 6.4 Reference to other sections

See Section 13 for disposal information.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

#### Information about fire - and explosion protection

Provide appropriate exhaust ventilation at places where dust is formed.

#### Hygienic measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

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

#### Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

#### Storage stability

Recommended storage temperature 2 - 8 °C

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

Substances without occupational exposure limits

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Face/eye protection

Face shield and safety glasses 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.

**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**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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 and character	Liquid
b) odour	Data not available
c) Odour threshold	Data not available
d) pH value	Data not available
e) Melting point/freezing point	18 - 23 °C
f) initial boiling point and boiling range	212 °C
g) Flash point	> 102.2 °C
h) Evaporation rate	Data not available
i) Flammability (solid, gas)	Data not available
j) Combustible or explosive limits	Data not available
k) Vapour pressure	Data not available
l) Vapour density	Data not available
m) The density/relative density	Data not available
n) Water soluble	Data not available
o) Partition coefficient: n-octanol/water	log Pow: -0.367
p) Auto-Ignition temperature	355 °C, 1,007.3 - 1,013 hPa
q) Decomposition temperature	Data not available
r) Viscosity	Dynamic: Data not available Kinematic: Data not available
s) Explosive properties	Data not available
t) Oxidising properties	Data not available

**9.2 Other information**

Data not available

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## SECTION 10: Stability and reactivity

### 10.1 Chemical stability

Stable under recommended storage conditions.

### 10.2 chemical reaction

Data not available

### 10.3 Conditions to avoid

Heat, flame and spark

### 10.4 Incompatible materials

Strong oxidizing agents

### 10.5 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

via oral route: Data not available

via inhalation route: Data not available

via dermal route: Data not available

#### Skin corrosion/irritation

Data not available

#### Serious eye damage/irritation

Data not available

#### Respiratory or skin sensitisation

Data not available

#### Germ cell mutagenicity

Data not available

#### Carcinogenicity

Data not available

#### Reproductive toxicity

Data not available

#### STOT-single exposure

Data not available

#### STOT-repeated exposure

Data not available

#### Aspiration hazard

Data not available

### 11.2 Additional Information

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**

Data not available

**12.2 Persistence and degradability**

Data not available

**12.3 Bioaccumulative potential**

Data not available

**12.4 Mobility in soil**

Data not available

**12.5 Results of PBT and vPvB assessment**

PBT: Not applicable

vPvB: Not applicable

**12.6 Other adverse effects**

Data not available

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**SECTION 14: Transport information****14.1 UN number**

ADR/RID: -

IMDG: -

IATA-DGR: -

**14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA-DGR: Not dangerous goods

**14.3 Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA-DGR: -

**14.4 Packaging group**

ADR/RID: -

IMDG: -

IATA-DGR: -

**14.5 Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no



## 14.6 Special precautions for user

### 14.7 Incompatible materials

Strong oxidizing agents

#### Further information

Not classified as dangerous goods according to transport regulations.

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## SECTION 15: Regulatory information

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

#### Applicable regulations

#### Other regulations

Please note that waste disposal should also meet the requirements of local regulations.

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## SECTION 16: Other information

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

### 16.2 Compilation and revision information

This is version 1.0. This safety data sheet is in compliance with the following national standards: GB/T 16483-2008、GB/T 17519-2013、GB 30000.

### 16.3 References

- 【1】 IPCS: (ICSC) , website: <http://www.ilo.org/dyn/icsc/showcard.home>
- 【2】 IARC, website: <http://www.iarc.fr/>
- 【3】 eChemportal-The Global Portal to Information on Chemical Substances by OECD  
website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- 【4】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- 【5】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- 【6】 U.S.Environmental Protection Agency: Integrated hazard information system,  
website: <http://cfpub.epa.gov/iris/>
- 【7】 ERG-Emergency Response Guidebook by U.S. DoT,  
website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- 【8】 German GESTIS-database on hazardous Substance, website: <http://gestis-en.itrust.de/>

#### Abbreviations and acronyms

MAC:maximum allowable concentration.It refers to the concentration of toxic chemicals that should not be exceeded at any time in a working day at the working place.

PC-TWA:permissible concentration-time weighted average, It refers to the average allowable exposure concentration of 8 h working days and 40 h working weeks with time as the weight.

PC-STEL:permissible concentration-short term exposure limit, It refers to the concentration allowed to be exposed for a short time (15 min) on the premise of observing PC-TWA.