

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : 4-Fluorophenyl chloroformate

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)
Acute toxicity, Oral (Category 3)
Skin corrosion (Category 1B)

According to European Directive 67/548/EEC as amended.
Toxic by inhalation, in contact with skin and if swallowed. Causes burns.

Label elements

Pictogram	
Signal word	Danger
Hazard statement(s)	
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
Precautionary statement(s)	
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
Hazard symbol(s)	
T	Toxic
R-phrases(s)	
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R34	Causes burns.
S-phrases(s)	
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27	Take off immediately all contaminated clothing.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Other hazards

Lachrymator.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C7H4ClFO2
Molecular Weight : 174,56 g/mol

CAS-No.	EC-No.	Classification	Concentration
4-Fluorophenyl chloroformate 38377-38-7	-	Acute Tox. 3; Skin Corr. 1B; H301, H311, H314, H331 T, R23/24/25 - R34	-

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

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 Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. 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.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe 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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

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

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

Vent periodically. Handle and open container with care. Moisture sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

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).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid
Colour colourless

Safety data

pH no data available
Melting point no data available
Boiling point no data available
Flash point 76 °C - closed cup
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Density 1,329 g/cm3 at 25 °C
Water solubility no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong bases, Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Hydrogen fluoride

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion Toxic if swallowed. Causes burns.

Skin Toxic if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 3277 Class: 6.1 (8) Packing group: II
Proper shipping name: CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S. (4-Fluorophenyl chloroformate)

IMDG

UN-Number: 3277 Class: 6.1 (8) Packing group: II EMS-No: F-A, S-B
Proper shipping name: CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S. (4-Fluorophenyl chloroformate)

Marine pollutant: No

IATA

UN-Number: 3277 Class: 6.1 (8) Packing group: II
Proper shipping name: Chloroformates, toxic, corrosive, n.o.s. (4-Fluorophenyl chloroformate)

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

Acute Tox. Acute toxicity
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
Skin Corr. Skin corrosion
T Toxic
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R34 Causes burns.

Further information

For R&D use only. Not for drug, household or other uses.

LookChem
Look for Chemicals

www.lookchem.com

WARRANTY:

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. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.