2-Propenoic acid, 2-methyl-, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester (cas 3063-94-3) MSDS

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

Product Name: 1,1,1,3,3,3-Hexafluoropropyl methacrylate

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No 1272/2008
- Flammable liquids (Category 2)
- Acute toxicity, Inhalation (Category 4)
- Acute toxicity, Dermal (Category 4)
- Acute toxicity, Oral (Category 4)
- Skin irritation (Category 2)
- Eye irritation (Category 2)
- Specific target organ toxicity - single exposure (Category 3)

- Highly flammable.
- Harmful by inhalation, in contact with skin and if swallowed.
- Irritating to eyes, respiratory system and skin.

Label elements

Pictogram

Signal word: Danger

Hazard statement(s)
- H225: Highly flammable liquid and vapour.
- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H332: Harmful if inhaled.
- H335: May cause respiratory irritation.

Precautionary statement(s)
- P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P280: Wear protective gloves/ protective clothing.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard symbol(s)
- F: Highly flammable
- Xn: Harmful

R-phrase(s)
- R11: Highly flammable.
- R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
- R36/37/38: Irritating to eyes, respiratory system and skin.

S-phrase(s)
- S16: Keep away from sources of ignition - No smoking.
- S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S33: Take precautionary measures against static discharges.
- S36: Wear suitable protective clothing.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: C7H6F6O2
Molecular Weight: 236.11 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
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</table>
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
Wash off with soap and plenty of water. 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
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, 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).

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
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. Store in cool place.

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
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.

**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 and body protection**
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

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: 14 °C - closed cup
- Ignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Vapour pressure: 48,939 hPa at 20 °C
  237,800 hPa at 55 °C
- Density: 1,302 g/cm³ at 25 °C
- Water solubility: no data available

10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Conditions to avoid**
Heat, flames and sparks. Extremes of temperature and direct sunlight.

**Materials to avoid**
Strong oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, 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**
Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**
Aspiration hazard
no data available

Potential health effects

**Inhalation**
Harmful if inhaled. Causes respiratory tract irritation.

**Ingestion**
Harmful if swallowed.

**Skin**
Harmful if absorbed through skin. Causes skin irritation.

**Eyes**
Causes serious eye irritation.

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

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**
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. 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: 3272 Class: 3
Proper shipping name: ESTERS, N.O.S. (2,2,2-Trifluoro-1-(trifluoromethyl)ethyl methacrylate)

**IMDG**
UN-Number: 3272 Class: 3
Proper shipping name: ESTERS, N.O.S. (2,2,2-Trifluoro-1-(trifluoromethyl)ethyl methacrylate)

**IATA**
UN-Number: 3272 Class: 3
Proper shipping name: Esters, n.o.s. (2,2,2-Trifluoro-1-(trifluoromethyl)ethyl methacrylate)

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-phrase(s) mentioned in Section 3**

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H335  May cause respiratory irritation.
Skin Irrit.  Skin irritation
F  Highly flammable
Xn  Harmful
R11  Highly flammable.
R20/21/22  Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38  Irritating to eyes, respiratory system and skin.

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 this document is based on the resent 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. guidechem 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.