Fluoryx Labs

Safety Data Sheet

FC07-04

2-(Perfluorobutyl)ethyl Methacrylate

Revised 19-November-2016

1. 1PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name	2-(Perfluorobutyl)ethyl methacrylate
Catalog Number	FC07-04
Brand	Fluoryx Labs
CAS Number	1799-84-4

Relevant identified uses of the Substance or mixture and uses advised against

Identified uses	Laboratory chemicals. Manufacture of substances.

Details of the supplier of the safety data sheet

Company	**Fluoryx Labs** 3650 Research Way, #22 Carson City, NV 89706 USA +1 (510) 329-9149 (Telephone) +1 (510) 686-8799 (Fax) www.fluoryx.com
Emergency call (ChemTel)	+01-813-248-0585 (International) +1-800-255-3924 (USA)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3), Respiratory system

GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning

Hazard statement(s)

H227	Combustible liquid.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280	Wear protective gloves/eye protection/face protection.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370 + P378	In case of fire: use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Synonyms *1H,1H,2H,2H*-Nonafluorohexyl-1-methacrylate;
3,3,4,4,5,5,6,6,6-Nonafluorohexyl methacrylate;
2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester

Formula: $CH_2=C(CH_3)C(O)OCH_2CH_2(CF_2CF_2)_2F$
$C_{10}H_9F_9O_2$

Molecular weight 332.17 g/mol

CAS number 1799-84-4

EC number 217-287-5

Hazardous components

Component	Classification	Concentration
2-(Perfluorobutyl)ethyl methacrylate	Flam. Liq. 4; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H227, H315, H319, H335	≤100%

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. Move out of dangerous area.

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.

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.

Indication of any immediate medical attention and special treatment needed - No data available

5. FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters	Wear self-contained breathing apparatus for fire fighting.
Hazardous combustion products	Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride.
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 vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods for 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.

7. HANDLING AND STORAGE

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.
Conditions for Safe Storage	Keep container tightly closed in a dry and well-ventilated place. Containers that are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature: 2 - 8 °C

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters	Contains no substances with occupational exposure limit values.
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	
Eye/face protection:	Safety glasses with side-shields conforming to EN166 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	Impervious clothing. 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	Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Form	Liquid, clear
Color	Colorless
Safety Data	
pH	3 to 5 @ 20 °C
Melting Point/Freezing Point	- 53 °C
Boiling Point	70 °C @ 9 mm Hg
Flash Point	79 °C (closed cup)
Ignition Temperature	No data available
Auto-ignition Temperature	No data available
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Vapor Pressure	No data available
Density	1.40 g/mL @ 20 °C
Water Solubility	Insoluble
Partition Coefficient (*n*-octanol/water)	No data available
Relative Vapor Density (Air = 1)	> 1
Odor	Acrylic
Odor Threshold	No data available
Evaporation Rate	No data available
Oxidizing Properties	No data available
Viscosity	No data available

10. STABILITY AND REACTIVITY

Reactivity	No data available
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Unless inhibited, product can polymerize, raising temperature and pressure, possibly rupturing container. Check inhibitor content (MEHQ) often adding to bulk liquid if needed.
Conditions to avoid	Heat, light.
Incompatible materials	Strong oxidizing agents.

Hazardous decomposition products	In combustion, emits toxic fumes including carbon monoxide, carbon dioxide, and hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Oral LD50 No data available Inhalation LC50 No data available Dermal LD50 No data available Other information on 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. **ACGIH** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. **NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. **OSHA** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Teratogenicity	No data available
Specific target organ toxicity (Globally Harmonized System)	
Single exposure	Inhalation – may cause respiratory irritation.
Repeated exposure	No data available
Aspiration hazard	No data available
Signs and Symptoms of Exposure:	No data available
Synergistic effects	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.

12. ECOLOGICAL INFORMATION

T**oxicity**	No data available
Persistence and degradability	Does not readily degrade.
Bioaccumulative potential	No data available
Mobility in soil	No data available
PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Other adverse effects	No data available

13. DISPOSAL CONSIDERATIONS

Disposal Considerations:	Dissolve in or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all Federal, State and local laws.
Product	This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer non-recyclable solutions to a licensed disposal company or contact Fluoryx to return unused product.
Contaminated Packaging	Dispose of as unused product.

14. TRANSPORTATION INFORMATION

DOT (US)	NA-Number: 1993 Class: NONE Packing group: III Proper shipping name: Combustible liquid, n.o.s. (2,2,3,3,4,4,5,5-Octafluoropentyl methylacrylate) Marine pollutant: No Poison Inhalation Hazard: No
IMDG	Not dangerous goods
IATA	Not dangerous goods

15. REGULATORY INFORMATION

TSCA Inventory	Listed
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards	Fire hazard
Massachusetts Right To Know Components	No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components	3,3,4,4,5,5,6,6,6-Nonafluorohexyl methacrylate CAS-No. 1799-84-4
New Jersey Right To Know Components	3,3,4,4,5,5,6,6,6-Nonafluorohexyl methacrylate CAS-No. 1799-84-4
California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

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

Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid
H227	Combustible liquid.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Skin Irrit.	Skin irritation
	STOT SE Specific target organ toxicity - single exposure

HMIS Classification

Health hazard	2
Flammability	1
Physical hazards	0

NFPA Rating

Health hazard	2
Fire	1
Reactivity hazard	0

Further Information

For R&D use only. Not for drug, household, or other uses. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. Unless noted to the contrary, the technical information applies only to pure product.

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End of SDS