

FC22-12m

Methyl Undecafluoro-2-methyl-3-oxahexanoate

Revised 14-September-2019

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product name	Methyl undecafluoro-2-methyl-3-oxahexanoate
Catalog number	FC22-12m
Brand	Fluoryx Labs
CAS number	13140-34-6

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Identified uses	Laboratory chemicals. Synthesis of substances.
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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
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Emergency Call (ChemTel)

+01-813-248-0585 (International)
+1-800-255-3924 (USA)

2. HAZARDS IDENTIFICATION

Emergency Overview:**Classification of the Substance or Mixture****GHS classification in accordance with 29 CFR 1910 (OSHA HCS)**

Skin irritation (Category 2), H315
 Eye irritation (Category 2A), H319
 Specific target organ toxicity – single exposure (Category 3), respiratory system, H335

GHS Label Elements, Including Precautionary Statements

Pictogram	GHS07: Exclamation mark
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Signal word

Warning

Hazard statement(s)

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

Precautionary statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
P321	Call a POISON CENTER or doctor/physician if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

Hazards Not Otherwise Classified (HNOC) or Not Covered by GHS - none

3. COMPOSITION AND INFORMATION ON COMPONENTS

Synonyms

HFPO dimer, methyl ester; Perfluoro-2-methyl-3-oxahexanoic acid, methyl ester

Formula	CF ₃ CF ₂ CF ₂ OCF(CF ₃)C(O)OCH ₃ C ₇ H ₃ F ₁₁ O ₃
Molecular Weight	344.08 g/mol
CAS Number	13140-34-6
EC Number	825-951-6

Hazardous Components

Component	Classification	Concentration
Methyl undecafluoro-2-methyl-3-oxahexanoate	Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H315, H319, H335	≤100%

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

4. FIRST AID MEASURES

Description of 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	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Consult a doctor.

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

Indications of Any Immediate Medical Attention

No data available.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

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

Special Hazards Arising from the Substance

Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride.

Advice for Firefighters

Wear self contained breathing apparatus for fire fighting.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions

Do not let product enter drains.

Methods for Cleaning Up

Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use explosion-proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel spills into appropriate container for disposal. Ventilate area.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid formation of mist or respirable particles. Provide appropriate exhaust ventilation at places where mist or vapors are formed. Normal measures for preventive fire protection. Keep away from open flames and heated surfaces above 200 °C (392 °F).

Conditions for Safe Storage

Store refrigerated (0 – 4 °C) protected from light. Keep container tightly. Containers which are opened must be carefully resealed under inert atmosphere and kept upright to prevent leakage.

Specific End Use(s)

Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with Workplace Control Parameters

Contains no substances with occupational exposure limit values.

Engineering Controls

Keep container tightly closed. Use only with adequate ventilation. Do not aerosolize or spray. Prevent leaks in high-pressure systems that could create fine mists.

Personal Protective Equipment**Eye/face protection**

Chemical goggles or 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

In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection.

Other information

Safety shoes. 29 CFR 1910.136: Foot Protection.

Control of Environmental Exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form

Liquid

Color

Clear, colorless

Safety Data

pH

No data available

Melting point/freezing point

No data available

Boiling point

115 - 117 °C @ 760 mm Hg

Flash point

> 100 °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

Thermal decomposition temperature

> 150 °C

Vapor pressure

No data available

Density

1.607 g/cm³

Water solubility

Negligible

Partition coefficient (*n*-octanol/water)

No data available

Relative vapor density (air = 1)

> 1

Odor

No data available

Odor threshold

No data available

Evaporation rate

No data available

Viscosity

No data available

Oxidizing properties

No data available

10. STABILITY AND REACTIVITY

Reactivity	No data available
Chemical Stability	Stable in sealed containers under dry, inert atmosphere, preferably refrigerated.
Possibility of Hazardous Reactions:	No data available. Store under inert (dry) atmosphere.
Conditions to Avoid	Exposure to light and moisture. Keep away from open flames and heated surfaces above 200 °C (392 °F).
Incompatible Materials	Avoid strong oxidizing agents.
Hazardous Decomposition Products	Decomposition temperature > 150 °C. Hazardous decomposition products formed under fire conditions - carbon oxides, 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	May cause skin irritation
Serious Eye Damage/Eye Irritation	Causes serious eye irritation
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
Specific Target Organ Toxicity (Globally Harmonized System)	
Single exposure	Inhalation – may cause respiratory irritation
Repeated exposure	No data available
Aspiration Hazard	No data available
Synergistic Effects	No data available
Additional Information	RETECS number not available
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.	

12. ECOLOGICAL INFORMATION

Toxicity	No data available
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Persistence and Degradability	Not readily biodegradable
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

Product	Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber. Contact Fluoryx to return unused product.
Contaminated Packaging	Dispose of as unused product.

14. TRANSPORTATION INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

15. REGULATORY INFORMATION

TSCA Status	Not listed.
DSL Status	Not on the Canadian DSL list or the NDSL.
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	Acute Health Hazard
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. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

HMIS Rating

Health hazard	1
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