

FC12-T4Hexane

1-(Perfluorobutyl)hexane

Revised 21-November-2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name

Catalog Number	FC12-T4Hexane
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Product Identifier

Product name	1-(Perfluorobutyl)hexane
Catalog number	FC12-T4Hexane
Brand	Fluoryx Labs
CAS number	1190430-19-3

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 INFORMATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
 Eye Irritant (category 2), H320
 Skin Irritant (category 2), H315
 Specific target organ toxicity – single exposure (Category 4), H302+312+332

GHS Label elements, including precautionary statements

Pictogram	GHS07: Exclamation mark
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Signal word:	Warning
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Hazard statement(s)

H302+312+332	Harmful if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation.
H320	Causes eye irritation.

Precautionary statement(s)

P264	P261 Avoid breathing
P271	dust/fume/gas/mist/vapors/spray.
P280	Wash skin thoroughly after handling.
	Use only outdoors or in a well-ventilated area.
P302 + P352	Wear protective gloves/eye protection/face protection.
P304 + P340	IF ON SKIN: Wash with plenty of soap and water.
	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.
	Call a POISON CENTER or doctor/ physician if you feel unwell.
P312	If skin irritation occurs: Get medical advice/ attention.
P332 + P313	If eye irritation persists: Get medical advice/ attention.
P337 + P313	Take off contaminated clothing and wash before reuse.
P362	Store in a well-ventilated place. Keep container tightly closed.
P403 + P233	Dispose of contents/container to an approved waste disposal plant.
P501	

Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Synonyms	1,1,1,2,2,3,3,4,4-Nonafluorodecane; 1-(Perfluorobut-1-yl)hexane; F4H6; Decane, 1,1,1,2,2,3,3,4,4-nonafluoro-
Chemical formula:	C ₁₀ H ₁₄ F ₉ CF ₃ CF ₂ CF ₂ CF ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH ₃
Molecular Weight	304.20 g/mol
CAS Number	1190430-19-3
EC Number	None

Hazardous Components

Component	Classification	Concentration
1-(Perfluorobutyl)hexane	STOT SE 4; Skin Irrit. 2; Eye Irrit. 2A; H302+312+332, H315, H320	≤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.

If swallowed

Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Consult a doctor.

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. FIREFIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media

"Alcohol" foam, dry chemical, or carbon dioxide. Cool all affected containers with flooding quantities of water.

Special hazards arising from the substance or mixture: Emits toxic fumes. Carbon oxides. Hydrogen fluoride

Advice for firefighters

Wear self-contained breathing apparatus for firefighting. Wear protective clothing to prevent contact with skin and eyes.

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

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

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 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.

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.

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.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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

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

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form Liquid, clear
Color Colorless

Safety Data

pH Neutral
Melting point/freezing point No data available
Boiling point 124 - 125 °C at 760 mm Hg (measured)
Flash point No data available
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 1.260 g/mL @ 20 °C (measured)
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 1.289 mPa @ 25 °C (literature)

Oxidizing properties	No data available
Surface tension	No data available

10. STABILITY AND REACTIVITY

Reactivity	No data available
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid	Keep away from open flames and heated surfaces above 200 °C (392 °F).
Incompatible Materials	Avoid strong oxidizing agents and strong bases.
Hazardous Decomposition Products	Decomposition temperature > 200 °C. Hazardous decomposition products formed under fire conditions - carbon oxides and hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	INH DRM ING	Based on similar chemical test data
Skin corrosion/irritation	DRM	Based on similar chemical test data
Serious eye damage/irritation	OPT	Based on similar chemical test data
STOT-single exposure	INH	Based on similar chemical test data
Respiratory or Skin Sensitization	No data available	
Germ Cell Mutagenicity	No data available	
Carcinogenicity	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	
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	
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.	
Synergistic Effects	No data available	

Additional Information

RTECS: Not available.

12. ECOLOGICAL INFORMATION

Toxicity	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	This substance is not identified as a PBT substance.
Other Adverse Effects	No data available

13. DISPOSAL CONSIDERATIONS

Product	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)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

15. REGULATORY INFORMATION

TSCA Status	Not on the inventory.
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.
Massachusetts Right to Know Components	No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right to Know Components	No components are subject to the Pennsylvania Right to Know Act.
New Jersey Right to Know Components	No components are subject to the New Jersey Right to Know Act.
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. H302+312+332	Eye irritation. Harmful if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation.
H320	Causes eye irritation.

Skin Irrit.
STOT SE

Skin irritation.
Specific target organ toxicity - single exposure.

HMIS Rating

Health hazard	1
Flammability	0
Physical hazards	0

NFPA Rating

Health hazard	1
Fire	0
Reactivity hazard	0

Further Information

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