

FC09-08E

2-(Perfluorooctyl)ethyl Triethoxysilane

Revised 21-November-2016

 1. IDENTIFICATION OF SUBSTANCE

Product Identifier

Product Name	2-(Perfluorooctyl)ethyl triethoxysilane
Catalog Number	FC09-08E
Brand	Fluoryx Labs
CAS Number	101947-16-4

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

Identified uses	Laboratory chemicals. Manufacture 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

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

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

GHS Label Elements, Including Precautionary Statements

Pictogram	GHS07: Exclamation mark
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Signal Word	Warning
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Hazard statements

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

Precautionary phrases	
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P261
P271
P280

Avoid breathing dust, fume, gas, mist, vapors, spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Synonyms Perfluorooctyl ethyl triethoxysilane;
1H,1H,2H,2H-Perfluorodecyltriethoxysilane;
(1H,1H,2H,2H-Perfluorodec-1-yl)tris(ethoxy)silane;
(1H,1H,2H,2H-Perfluorodecyl)tris(ethoxy)silane;
Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)silane

Formula (CH₃CH₂O)₃SiCH₂CH₂(CF₂)₈F;
C₁₆H₁₉O₃F₁₇Si

Molecular Weight 610.38 g/mol

CAS Number 101947-16-4

EC Number None

Hazardous Components

Component	Classification	Concentration
2-(Perfluorooctyl)ethyl triethoxysilane	STOT SE 3: H335; Eye Irrit. 2: H319; Skin Irrit. 2: H315	≤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	Remove/Take off immediately all contaminated clothing. Wash off with soap and plenty of water.
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.

Indications of Any Immediate Medical Attention No additional measures required.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Carbon dioxide, dry chemical powder, foam, and sand.
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,

hydrogen chloride.

Further Information

No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Refer to section 8 of SDS for personal protection details. If outside, do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

Environmental Precautions

Do not discharge to drains or rivers. Contain the spillage using bunding. Do not release into environment.

Clean-Up Procedures:

Absorb into dry earth, sand, or vermiculite. Transfer to a closable, labeled salvage container for disposal by an appropriate method.

7. HANDLING AND STORAGE

Personal Precautions:

Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

Storage Conditions:

Keep tightly closed. Store under dry, inert atmosphere: product reacts slowly with water. Protect from atmospheric moisture.

Suitable Packaging:

Moisture resistant packaging.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Workplace exposure limits:

None known

Appropriate Engineering Controls

General industrial hygiene practice.

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

Choose body protection in relation to its type, to the concentration and amount of dangerous substance, and to the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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 Clear liquid
Color Clear to straw color

Safety Data

pH 5 - 9 @ 20 °C
Melting point/freezing point < 0 °C
Boiling point 209 to 230 °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 No data available
Vapor pressure < 1 mm Hg @ 20 °C
Density 1.389 g/mL @ 25 °C
Water solubility Reacts with water (hydrolyzes)
Partition coefficient (*n*-octanol/water) No data available
Relative vapor density (air = 1) 21.2
Odor No data available
Odor threshold No data available
Evaporation rate No data available
Oxidizing properties No data available

10. STABILITY AND REACTIVITY

Reactivity Reacts slowly with water.
Chemical Stability Stable in sealed containers under dry, inert atmosphere.
Possibility of Hazardous Reactions: Reacts slowly with water. Unless protected from moisture, product can polymerize. Store under inert (dry) atmosphere.
Conditions to Avoid Exposure to moisture.
Incompatible Materials Avoid strong oxidizing agents, water, alcohols, and strong acids.
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 Not corrosive
Serious Eye Damage/Eye Irritation No data available.

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
Teratogenicity	No data available
Specific Target Organ Toxicity (Globally Harmonized System)	
Single exposure	No data available
Repeated exposure	No data available
Aspiration Hazard	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

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. Contact Fluoryx to return unused product. Hydrolyze material by mixing with water in a hood. Aqueous layer contains methanol. Organic layer may be incinerated. Alternately, absorb onto clay or vermiculite and dispose of absorbent material as solid waste.
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

Safety, Health and Environmental Regulations:	No data
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	No SARA hazards.
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 Law
New Jersey Right to Know Components	No components are subject to the New Jersey Right to Know Law
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

STOT SE	Specific target organ toxicity – single exposure
Eye Irrit.	Eye irritant
Skin Irrit.	Skin irritant
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation.
HMIS Classification	
Health hazard	1
Flammability	0
Physical hazards	0
NFPA Rating	
Health hazard	1
Fire	0
Reactivity hazard	1
Special	W
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