



# Material Safety Data Sheet

## FC04-12 2-(Perfluorododecyl) Ethyl Alcohol

Revised 12-August-2009

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### Material Identification

**Product name:** FC04-12  
**Chemical name:** 2-(Perfluorododecyl) ethyl alcohol  
*1H, 1H, 2H, 2H-Pentacosafuorotetradecan-1-ol*  
**Chemical formula:** HOCH<sub>2</sub>CH<sub>2</sub>(CF<sub>2</sub>CF<sub>2</sub>)<sub>6</sub>F  
C<sub>14</sub>H<sub>5</sub>F<sub>25</sub>O

#### Company Identification

**Distributor:** **Fluoryx, Inc.**  
20885 Redwood Rd. #347  
Castro Valley, CA 94546  
USA  
**Emergency call:** +86-1346-4812437  
+1-510-329-2811

### 2. 2. COMPOSITION AND INFORMATION ON INGREDIENTS

Material	Molecular Weight	Weight Percent	EINECS #	CAS #
2-(Perfluorododecyl) ethyl alcohol	664.15	> 98 %	NA	39239-77-5

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview:

#### Potential Effects of Exposure:

**General:** Based on animal experiments, gross overexposure may cause abnormal liver or kidney function as detected by laboratory tests.

**Skin contact:** May cause skin irritation with discomfort or rash. Data to evaluate the skin permeation hazard of this compound are insufficient. There are no reports of human sensitization.

**Eye contact:** May cause eye irritation with discomfort, tearing, or blurring of vision.

**Inhalation:** Inhalation of spray or mist may cause nasal, throat, or lung irritation. Inhalation of large amounts of

respirable particles may be toxic to the lungs. Symptoms may be modest initially, followed in hours by severe shortness of breath requiring prompt medical attention.

**Carcinogenicity Information:**

None of the components present in this material at concentrations equal to or greater than 0.1 % are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

**4. FIRST AID MEASURES**

**Oral Exposure:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Inhalation Exposure:** If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**Dermal Exposure:** In case of contact, immediately wash skin with soap and copious amounts of water.

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**5. FIRE FIGHTING MEASURES**

**Flammable Properties**

**Flash point:** > 100 °C (closed cup)

**Autoignition temp:** N/A

**Flammability:** N/A

**Extinguishing Media:** Use fire-fighting measures which suit the environment and take into account other materials which may be involved. In general, water-based extinguishers should not be used for fires involving organic materials. Use carbon dioxide or dry powder.

**Protective Equipment:** Wear self-contained breathing apparatus and protective clothing.

**Hazardous Products of Combustion May Include:** Carbon dioxide, carbon monoxide, hydrogen fluoride, toxic gases or particles may be formed during combustion. These products may cause severe eye, nose, throat, and lung irritation or toxic effects.

**Fire Fighting Instructions:** Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Avoid breathing decomposition products.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

<b>Environmental Protection:</b>	Take precautions to ensure product does not contaminate the ground or enter the drainage system.
<b>Clean-Up Procedures:</b>	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## 7. HANDLING AND STORAGE

<b>Handling Requirements:</b>	User exposure: avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
<b>Storage Conditions:</b>	Keep tightly closed.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Engineering Controls:</b>	Safety shower and eye bath. Mechanical exhaust required.
<b>Personal Protective Equipment</b>	
<b>Eye/face protection:</b>	Chemical safety goggles.
<b>Respirators:</b>	Self-contained breathing apparatus must be available in case of emergency.
<b>Hand protection:</b>	Compatible chemical-resistant gloves.
<b>General Hygiene Measures:</b>	Wash thoroughly after handling. Wash contaminated clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Molecular Weight</b>	664.15 g/mol
<b>pH</b>	N/A
<b>Boiling Point</b>	254.6 °C @ 760 mm Hg
<b>Melting Point</b>	N/A
<b>Vapor Pressure</b>	N/A
<b>Vapor Density</b>	> 1 (air = 1)
<b>Saturated Vapor Conc.</b>	N/A
<b>Specific Gravity/Density</b>	1.686 g/mL
<b>Odor Threshold</b>	N/A
<b>Flash Point</b>	> 100 °C
<b>Explosion Limits</b>	N/A
<b>Flammability</b>	N/A
<b>Refractive Index</b>	1.293
<b>Water Solubility</b>	N/A

N/A = not available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable at normal temperatures and storage conditions.
----------------------------	---

**Incompatibility with Other Materials:** None reasonably foreseeable.

**Decomposition:** Hazardous decomposition products including carbon dioxide, carbon monoxide, hydrogen fluoride, toxic gases or particles may be formed during combustion. These products may cause severe eye, nose, throat, and lung irritation or toxic effects.

**Polymerization:** Polymerization will not occur.

**11. TOXICOLOGICAL INFORMATION**

**Chronic Toxicity:** May be harmful by inhalation, ingestion, or skin absorption.

**Routes of Exposure:** Refer to section 3 of SDS for routes of exposure and corresponding symptoms. May be harmful if swallowed, inhaled, or absorbed through skin.

**12. ECOLOGICAL INFORMATION**

**No data available.**

**General:** Take care to prevent chemicals from entering the ground, water courses or drainage systems.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal:** Contact a licensed professional waste disposal service to dispose of this material. Dissolve 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 environmental regulations.

**14. TRANSPORTATION INFORMATION**

<b>Mode</b>	DOT/IMDG/IATA
<b>UN Number</b>	None. Non-hazardous for transport.
<b>Class (Subsidiary)</b>	None. Non-hazardous for transport.
<b>Proper Shipping Name</b>	None. Non-hazardous for transport.
<b>Hazard Label (Subsidiary)</b>	None. Non-hazardous for transport.
<b>Packing Group</b>	None. Non-hazardous for transport.
<b>Shipping Hazard Label</b>	None. Non-hazardous for transport.

**15. REGULATORY INFORMATION**

**United States Regulatory Information**

**SARA Listed:** No

**Canada Regulatory Information**

**WHMIS Classification:** This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** Yes

**NDSL:** No

---

**16. OTHER INFORMATION**

---

**Legal Disclaimer:**

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.

To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither Fluoryx Inc., nor any of its affiliates makes any warranty, express or implied, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes.

End of MSDS