

FC13-BDE Bis(2,2-difluoroethyl)ether

Revised 26-October-2023

1. PRODUCT AND COMPANY IDENTIFICATION


Product Name	Bis(2,2-difluoroethyl)ether
Catalog Number	FC13-BDE
CAS Number	69948-35-2
Supplier	Fluoryx Labs 3650 Research Way, #22 Carson City, NV 89706 USA
Emergency call (VelocityEHS):	+01-813-248-0585 (International) +1-800-255-3924 (USA)

2. HAZARDS INFORMATION

Emergency Overview

OSHA Hazards	No known OSHA hazards
GHS Classification	Eye irritation, H320; May cause respiratory irritation, H335

GHS Label elements, including precautionary statements

Pictogram	
Signal word	Warning
Hazard statement(s)	H320: Causes eye irritation. H335: May cause respiratory irritation
Precautionary statement(s)	P264: Wash hands thoroughly after handling. 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. P337 + P313: If eye irritation persists: Get medical advice/attention.

Hazards not otherwise classified (HNOC) or not covered by GHS

Inhalation of decomposition products from overheating may cause lung irritation or shortness of breath.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Synonyms	2-(2,2-difluoroethoxy)-1,1-difluoroethane;
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FC13-BDE

HFE-BDE

Chemical formula

CF₂HCH₂OCH₂CF₂H
C₄H₆F₄O

Molecular weight

146.08 g/mol

CAS number

69948-35-2

EC number

None

TSCA status

Not listed

Components

Material	Classification	Concentration
Bis(2,2-difluoroethyl)ether	H320, H335	≤ 100%

4. FIRST AID MEASURES

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 water.

In case of eye contact

Flush eyes with water for 15 minutes. Consult a physician

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment, such as: carbon dioxide, dry chemical powder, water. Do not use water with a full water jet.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear personal protective equipment. Avoid contact with the skin and the eyes. Ensure adequate ventilation. Avoid inhalation of vapor, mist, dust, or gas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Mix with sand or vermiculite. Transfer to a closable, labeled salvage container for disposal by an appropriate method

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.

Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and 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.

Hygiene measures

General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Liquid
Color	Colorless

Safety Data

pH	No data available
Melting Point/Freezing Point	No data available
Boiling Point	103 °C @ 1 atm
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
Thermal Decomposition Temperature	No data available
Vapor Pressure	No data available
Density	1.355 g/mL @ 20 °C
Water Solubility	No data available
Partition Coefficient (<i>n</i> -octanol/water)	No data available
Relative Vapor Density (Air = 1)	> 1
Odor	Ether-like
Odor Threshold	No data available
Evaporation Rate	No data available
Refractive index	No data available
Viscosity	No data available

10. STABILITY AND REACTIVITY

Storage stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Keep away from open flames and heated surfaces above 300 °C.
Materials to avoid	Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride, carbonyl 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	<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	No data available
Repeated exposure	No data available
Aspiration Hazard	No data available
Potential Health Effects	
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be irritating.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.
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 No data available

12. ECOLOGICAL INFORMATION

Toxicity No data available

Persistence and Degradability No data available

Bioaccumulative Potential No data available

Mobility in Soil No data available

PBT and vPvB Assessment No data available

Other adverse effects No data available

13. DISPOSAL CONSIDERATIONS

Product Offer non-recyclable solutions to a licensed disposal company. Contact Fluoryx Labs 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

OSHA Hazards No known OSHA hazards.

TSCA Status Listed.

DSL Status This product does not contain components listed on the Canadian NDSL list.

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 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

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 MSDS