1,3-Bis(3-fluoropropoxy)propan-2-ol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
SDS Reference Number: 210731B
Issue date: 5/25/2016 Revision date: 10/27/2026 Supersedes: 7/5/2023 Version: 1.2

SECTION 1 Identification

1.1. Product identifier

Product form	:	Substance
Substance name	:	1,3-Bis(3-fluoropropoxy)propan-2-ol
CAS-No.	:	1346521-20-7
Product code	:	2107-3-1B
Formula	:	C9H18F2O3

1.2. Other means of identification

Other means of identification	:	MFCD20489358

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	:	Laboratory chemicals,Manufacture of substances,Scientific research and development

1.4. Supplier's details

SynQuest Laboratories, Inc.
P.O. Box 309
Alachua, FL, Alachua, 32615
United States of America
T (386) 462-0788 - F (386) 462-7097
info@synquestlabs.com - www.synquestlabs.com

1.5. Emergency phone number

Emergency number	:	(844) 523-4086 (3E Company - Account 10069)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral), Category 1	H300	Fatal if swallowed.
Acute toxicity (dermal), Category 4	H312	Harmful in contact with skin.
Acute toxicity (inhalation), Category 1	H330	Fatal if inhaled.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 2A	H319	Causes serious eye irritation.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H300+H330 - Fatal if swallowed or if inhaled
H312 - Harmful in contact with skin
H315 - Causes skin irritation

		H319 - Causes serious eye irritation H335 - May cause respiratory irritation
Precautionary statements (GHS US)	:	P260 - Do not breathe dust, fume, gas, mist, vapours, spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves. P284 - Wear respiratory protection. P301+P310 - If swallowed: Immediately call a poison center or doctor. P302+P352 - If on skin: Wash with plenty of soap and water P304+P340 - If inhaled: Remove person to fresh air and keep 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 P310 - Immediately call a POISON CENTER or doctor/ physician P320 - Specific treatment is urgent (see supplemental first aid instruction on this label). P321 - Specific treatment (see supplemental first aid instruction on this label). P330 - Rinse mouth. P332+P313 - If skin irritation occurs: Get medical advice or attention. P337+P313 - If eye irritation persists: Get medical advice or attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS US classification
1,3-Bis(3-fluoropropoxy)propan-2-ol (Main constituent)	CAS-No.: 1346521-20-7	≤ 100	Acute Tox. 1 (Oral), H300 Acute Tox. 4 (Dermal), H312 Acute Tox. 1 (Inhalation), H330 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.

First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get immediate medical advice/attention.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Alcohol resistant foam. Carbon dioxide. Dry powder. Water spray. Use extinguishing media appropriate for surrounding fire.

5.2. Specific hazards arising from the chemical

Fire hazard : Thermal decomposition generates: Carbon oxides. Hydrogen fluoride.

Explosion hazard : Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection during firefighting : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate unnecessary personnel. Ensure adequate air ventilation. Do not breathe gas, fumes, vapor or spray.

For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level.

Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

For containment	:	Stop leak if safe to do so. Dike for recovery or absorb with appropriate material.
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.
Other information	:	For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal protective equipment. Avoid contact with skin and eyes.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Comply with applicable regulations.
Storage conditions	:	Keep container closed when not in use.
Storage area	:	Store in dry, cool, well-ventilated area.
Incompatible materials	:	Refer to Section 10 on Incompatible Materials.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropiate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures, such as personal protective equipment

Hand protection:
protective gloves. 29 CFR 1910.138: Hand Protection
Eye protection:
Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection

Personal protective equipment symbol(s):

Other information:
Safety shoes. 29 CFR 1910.136: Foot Protection.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	No data available
Odor	:	No data available
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Molecular mass	:	212.23 g/mol
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral)	:	Fatal if swallowed.
Acute toxicity (dermal)	:	Harmful in contact with skin.
Acute toxicity (inhalation)	:	Fatal if inhaled.
Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitization	:	No data available
Germ cell mutagenicity	:	No data available
Carcinogenicity	:	No data available
Reproductive toxicity	:	No data available
STOT-single exposure	:	May cause respiratory irritation.
STOT-repeated exposure	:	No data available
Aspiration hazard	:	No data available
Symptoms/effects	:	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short–term (acute)	:	No data available
Hazardous to the aquatic environment, long–term (chronic)	:	No data available

12.2. Persistence and degradability

1,3-Bis(3-fluoropropoxy)propan-2-ol (1346521-20-7)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone	:	No data available
Fluorinated greenhouse gases	:	No

SECTION 13 Disposal considerations

Waste treatment methods : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information : Recycle the material as far as possible.

SECTION 14 Transport information

14.1. UN number

UN-No.(DOT) : UN2810

UN-No. (TDG) : UN2810

UN-No. (IMDG) : 2810

UN-No. (IATA) : 2810

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s.

Proper Shipping Name (TDG) : TOXIC LIQUID, ORGANIC, N.O.S.

Proper Shipping Name (IMDG) : TOXIC LIQUID, ORGANIC, N.O.S.

Proper Shipping Name (IATA) : Toxic liquid, organic, n.o.s.

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 6.1

Hazard labels (DOT) : 6.1

TDG

Transport hazard class(es) (TDG) : 6.1

Hazard labels (TDG) : 6.1

IMDG

Transport hazard class(es) (IMDG) : 6.1

Hazard labels (IMDG) : 6.1

IATA

Transport hazard class(es) (IATA) : 6.1

Hazard labels (IATA) : 6.1

14.4. Packing group

Packing group (DOT)	:	I
Packing group (TDG)	:	I
Packing group (IMDG)	:	I
Packing group (IATA)	:	I

14.5. Environmental hazards

Other information	:	No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No.(DOT)	:	UN2810
DOT Special Provisions (49 CFR 172.102)	:	T14 - 6 6 mm Prohibited 178.275(g)(3). TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP13 - Self-contained breathing apparatus must be provided when this hazardous material is transported by sea. TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	201
DOT Packaging Bulk (49 CFR 173.xxx)	:	243
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	30 L
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	:	40 - Stow ‘‘clear of living quarters’’

TDG

UN-No. (TDG)	:	UN2810

TDG Special Provisions	:	16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(A) of Part 3, Documentation. The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4, Dangerous Goods Safety Marks. 2) subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical: a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the “Food and Drugs Act”,115 - This shipping name must not be used for dangerous goods included in Class 6.1 that meet the inhalation toxicity criteria for Packing Group I set out in paragraph 2.29(2)(d) of Part 2 (Classification). Dangerous goods that are toxic by inhalation must be assigned to one of the following UN numbers: UN3381 to UN3390 or UN3488 to UN3491. One must choose the appropriate shipping name, which will depend on the primary class and, if applicable, the subsidiary classes. SOR/2014-306 UN1583, UN2810, UN2927, UN2929, UN3122, UN3123, UN3275, UN3276, UN3278 to UN3281, UN3287, UN3289 SOR/2014-306
ERAP Index	:	1000
Explosive Limit and Limited Quantity Index	:	0
Excepted quantities (TDG)	:	E5
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	1 L
Emergency Response Guide (ERG) Number	:	153

IMDG

Special provision (IMDG)	:	274, 315
Limited quantities (IMDG)	:	0
Excepted quantities (IMDG)	:	E5
Packing instructions (IMDG)	:	P001
Tank instructions (IMDG)	:	T14
Tank special provisions (IMDG)	:	TP2, TP13, TP27
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES
Stowage category (IMDG)	:	B
Stowage and handling (IMDG)	:	SW2
Properties and observations (IMDG)	:	Toxic if swallowed, by skin contact or by inhalation.

IATA

Special provision (IATA)	:	A3, A4, A137
PCA Excepted quantities (IATA)	:	E5
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	652
PCA max net quantity (IATA)	:	1L
CAO packing instructions (IATA)	:	658
CAO max net quantity (IATA)	:	30L
ERG code (IATA)	:	6L

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

1,3-Bis(3-fluoropropoxy)propan-2-ol	CAS-No. 1346521-20-7	100%

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. State regulations

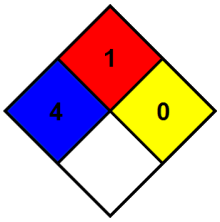
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 10/27/2026
Issue date : 5/25/2016

Full text of hazard classes and H-statements	
H300	Fatal if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H335	May cause respiratory irritation

NFPA health hazard : 4 - Materials that, under emergency conditions, can be lethal.
NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating
Health : 4 Severe Hazard - Life-threatening, major or permanent damage may result from single or repeated overexposures
Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Indication of changes:		
Section	**Changed item**	**Comments**
2		**Added** Toxicity codes

4		**Modified** Modified to reflect section 2 toxicity additions.
14		**Added** DOT 2810
16		**Modified** HMIS/NFPA Health from 3 to 4

Safety Data Sheet (SDS), USA

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.