ThawSTAR® CFT2 and CFT1.5 Confirmation Vials

Safety Data Sheet

according to Federal Register / Vol. 89, No. 98 / Monday, May 20, 2024 / Rules and Regulations, Canada Hazardous Products Regulations (HPR) / Règlement sur les produits dangereux (RPD), Mexico NOM-018-STPS-2015
Issue date: 01 May 2026 SDS-0022 Version: 02

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Name : ThawSTAR® CFT2 and CFT1.5 Confirmation Vials

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Thaw testing.
Restrictions on use : Not to be used in the liquid phase of liquid nitrogen.

1.4. Supplier's details

BioLife Solutions, Inc.
3303 Monte Villa Parkway
Suite 310
Bothell, WA 98021 United States of America
Tel.: +1 (425) 402-1400 (Monday - Friday, 8:00 am - 5:00 pm Pacific)
Email: info@biolifesolutions.com

1.5. Emergency phone number

Emergency number : +1 (866) 424-6543 (Monday - Friday, 8:00 am - 5:00 pm Pacific)

SECTION 2: Hazard Identification

2.1. Classification of the substance or mixture

GHS classification

Not classified

2.2. Label elements

GHS labeling

No labeling applicable

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

90% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
90% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS classification
Glycerol (glycerin, glycerine)	CAS-No.: 56-81-5	10 - 30	Not classified

Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Wash skin with plenty of water. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : None under normal conditions.

Symptoms/effects after ingestion : None under normal conditions.

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

Treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Absorb spillage to prevent material-damage. Notify authorities if product enters sewers or public waters.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate unnecessary personnel. Ventilate spillage area.

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". Equip cleanup crew with proper protection.
Emergency procedures	:	Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate area.
Environmental precautions	:	Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

For containment	:	Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	:	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information	:	Dispose of materials or solid residues at an authorized site.

For further information refer to section 13, See Heading 8, Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Provide good ventilation in process area to prevent formation of vapor. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	:	Keep cool. Protect from sunlight. Keep container closed when not in use.
Incompatible materials	:	Strong acids. Strong bases. Strong oxidizers.
Packaging materials	:	Always store product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Glycerol (glycerin, glycerine) (56-81-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	10 mg/m³
USA - OSHA - Occupational Exposure Limits	
Local name	Glycerin (mist)
OSHA PEL TWA	15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Mexico - Exposure Limits	
PPT	10 mg/m³
Alteration/Effect on health	Irritation of the upper respiratory tract

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Industrial and professional. Perform risk assessment prior to use. Provide local exhaust or general room ventilation.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:
Wear protective gloves. Wear water impervious gloves. Neoprene gloves. Nitrile rubber gloves. Butyl rubber gloves.

Eye protection:
Chemical goggles or safety glasses.

Skin and body protection:
Long sleeved protective clothing.

Respiratory protection:
None under normal use. If mist is formed, Use an approved respirator equipped with oil/mist cartridges.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear viscous liquid
Color	:	Colorless
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	5 (100 g/L aqueous solution)
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	Water: Miscible Ether: Very slightly soluble in diethyl ether/ethyl ether Acetone: Partially soluble Organic solvent: Insoluble in carbon tetrachloride, benzene, chloroform, petroleum ethers and oils. Limited solubility in ethyl acetate
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

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Not for use in the liquid phase of liquid nitrogen. Exposure to liquid-phase nitrogen may allow cryogenic fluid to ingress past the screw-cap seal, resulting in rapid pressure buildup upon warming and subsequent mechanical failure or fracture of the glass vial.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Likely routes of exposure : Skin and eye contact. Inhalation.

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

ThawSTAR® CFT2 and CFT1.5 Confirmation Vials	
Unknown acute toxicity (GHS)	90% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 90% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Glycerol (glycerin, glycerine) (56-81-5)	
LD50 Oral rat	27200 mg/kg body weight Animal: rat, Animal sex: female
LD50 Oral	18300 mg/kg rat
LD50 Dermal rabbit	> 10000 mg/kg
LC50 Inhalation rat	5.85 mg/l air Animal: rat
LC50 Inhalation rat (vapors)	> 2.75 mg/l Source: ECHA
ATE (oral)	27200 mg/kg body weight
ATE (vapors)	5.85 mg/l/4h
ATE (dust, mist)	5.85 mg/l/4h

Skin corrosion/irritation : Not classified
pH: 5 (100 g/L aqueous solution)
Serious eye damage/irritation : Not classified
pH: 5 (100 g/L aqueous solution)
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

ThawSTAR® CFT2 and CFT1.5 Confirmation Vials	
Viscosity, kinematic	No data available

Glycerol (glycerin, glycerine) (56-81-5)	
Viscosity, kinematic	No data available

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : None under normal conditions.

Symptoms/effects after ingestion : None under normal conditions.

SECTION 12: Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Glycerol (glycerin, glycerine) (56-81-5)	
LC50 fish	54000 mg/l Test organisms (species): *Oncorhynchus mykiss* (previous name: *Salmo gairdneri*)
LC50 - fish	51000 mg/l Test organisms (species): *Oncorhynchus mykiss* (Rainbow trout)

12.2. Persistence and degradability

ThawSTAR® CFT2 and CFT1.5 Confirmation Vials	
Persistence and degradability	Not established.

Glycerol (glycerin, glycerine) (56-81-5)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

ThawSTAR® CFT2 and CFT1.5 Confirmation Vials	
Bioaccumulative potential	Not established.

Glycerol (glycerin, glycerine) (56-81-5)	
Log Pow	-1.75 Source: ECHA

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Fluorinated greenhouse gases : No.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information	:	Do not re-use empty containers.
Ecology - waste materials	:	Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	:	Not regulated.
Proper Shipping Name (TDG)	:	Not regulated.
Proper Shipping Name (IMDG)	:	Not regulated.
Proper Shipping Name (IATA)	:	Not regulated.

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not regulated.

TDG

Transport hazard class(es) (TDG) : Not regulated.

IMDG

Transport hazard class(es) (IMDG) : Not regulated.

IATA

Transport hazard class(es) (IATA) : Not regulated.

14.4. Packing group

Packing group (DOT)	:	Not regulated.
Packing group (TDG)	:	Not regulated.
Packing group (IMDG)	:	Not regulated.
Packing group (IATA)	:	Not regulated.

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated.

TDG

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

SECTION 15: Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Glycerol (glycerin, glycerine)	56-81-5	Present	Active	

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Glycerol (glycerin, glycerine) (56-81-5)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Glycerol (glycerin, glycerine) (56-81-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Glycerol (glycerin, glycerine) (56-81-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on KECI (Korean Existing Chemicals Inventory) Listed on the TCSI (Taiwan Chemical Substance Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

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. 89, No. 98 / Monday, May 20, 2024 / Rules and Regulations, Canada Hazardous Products Regulations (HPR) / Règlement sur les produits dangereux (RPD), Mexico NOM-018-STPS-2015

Issue date : 2/24/2026

Data sources : Internal Company test data. Manufacturer Information.

Other information : None.

Abbreviations and acronyms	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor

Abbreviations and acronyms	
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organization for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant

Abbreviations and acronyms	
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Signature Manifest

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All dates and times are in US/Pacific.

ThawSTAR CFT2; CFT1.5 Confirmation Vial Safety Data Sheet (NA)

Collaboration Step

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Department Approval

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Training Approval

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Misti Long (MLONG)	QA Specialist I	01 May 2026, 12:02:12 PM	Approved

Document Control Approval

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Notification

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