
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category : Industrial use, professional use.
Use of the substance/mixture : Thaw testing.

1.2.2. Uses advised against

Restrictions on use : Not to be used in the liquid phase of liquid nitrogen.

1.3. Details of the supplier of the safety data sheet

BioLife Solutions, LLC
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

For Distributor Use Only:

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified.

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Glycerol (glycerin, glycerine) substance with national workplace exposure limit(s) (BE, HR, CZ, EE, FI, FR, DE, GR, IE, PL, SK, SI, ES, GB)	CAS-No.: 56-81-5 EC-No.: 200-289-5 REACH-no: 01-2119471987-18	10 – 20	Not classified

Chemical name, CAS number and/or exact concentration have been withheld as confidential business information

SECTION 4: First aid measures

4.1. Description of 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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

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 any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. 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. Special hazards arising from the substance or mixture

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. Advice for firefighters

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 the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. Complete protective clothing. EN 469.

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.
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6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Evacuate unnecessary personnel. Ventilate spillage area.

6.1.2. 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.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material 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.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. 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.

7.2. Conditions for safe storage, including any 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.
Storage class (LGK) : LGK 12 - Non-combustible liquids
Joint storage not permitted for : LGK 1, LGK 6.2, LGK 7
Joint storage with restrictions permitted for : LGK 4.1A, LGK 4.3, LGK 5.1C
Joint storage permitted for : LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Glycerol (glycerin, glycerine) (56-81-5)	
Belgium - Occupational Exposure Limits	
Local name	Glycérine (brouillard) # Glycerine (nevel)
Limit value [mg/m³]	10 mg/m³
Remark (BE)	(brouillard)

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Glycerol (glycerin, glycerine) (56-81-5)	
Regulatory reference	Koninklijk besluit/Arrêté royal 19/11/2020
Croatia - Occupational Exposure Limits	
Local name	Glicerol
GVI (granična vrijednost izloženosti) (mg/m³)	10 mg/m³
Regulatory reference	Pravilnik o izmjenama i dopunama Pravilnika o graničnim vrijednostima izloženosti opasnim tvarima pri radu i o biološkim graničnim vrijednostima (NN 1/2021)
Czech Republic - Occupational Exposure Limits	
Local name	Glycerol, mlha
Expoziční limity (PEL) (mg/m³)	10 mg/m³
Expoziční limity (PEL) (ppm)	2.6 ppm
Expoziční limity (NPK-P) (mg/m³)	15 mg/m³
Expoziční limity (NPK-P) (ppm)	3.9 ppm
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Estonia - Occupational Exposure Limits	
Local name	Glütseriin (glütserool, 1,2,3-propaantriool)
OEL TWA	10 mg/m³
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 17.10.2019, 2); Vabariigi Valitsuse 10. märtsi 2019. a määruse nr 84
Finland - Occupational Exposure Limits	
Local name	Glyseroli
HTP-arvo (8h) (mg/m³)	20 mg/m³
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveystieteiden ministeriö)
France - Occupational Exposure Limits	
Local name	Glycérine (aérosols de)
VME [mg/m³]	10 mg/m³
Note (FR)	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Glycerin
Occupational exposure limit value (mg/m³)	200 mg/m³ (E)
Peak exposure limitation factor	2(I)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Greece - Occupational Exposure Limits	
Local name	Γλυκερίνη
OEL TWA (mg/m³)	10 mg/m³
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους

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Glycerol (glycerin, glycerine) (56-81-5)	
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m³)	10 mg/m³
Poland - Occupational Exposure Limits	
Local name	Glicerol
NDS (mg/m³)	10 mg/m³ frakcja wdychalna
Remark	Frakcja wdychalna – frakcja aerozolu wnikać przez nos i usta, która po zdeponowaniu w drogach oddechowych stwarza zagrożenie dla zdrowia.
Regulatory reference	Dz. U. 2018 poz. 1286
Slovakia - Occupational Exposure Limits	
Local name	Glycerín
NPHV (priemerná) (mg/m³)	10 mg/m³
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	glicerín
OEL TWA	200 mg/m³
OEL STEL	400 mg/m³
Remark	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti)
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021
Spain - Occupational Exposure Limits	
Local name	Glicerina
VLA-ED (mg/m³)	10 mg/m³ nieblas
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2021. INSHT
United Kingdom - Occupational Exposure Limits	
Local name	Glycerol
WEL TWA (mg/m³)	10 mg/m³ mist
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Switzerland - Occupational Exposure Limits	
Local name	Glycérine / Glycerin
VME [mg/m³]	50 mg/m³ (i) / (e)
KZGW (mg/m³)	100 mg/m³ (i) / (e)
Critical toxicity	VRS / OAW
Notation	SS _c / SS _c
Remark	(inhalable aerosol)
Regulatory reference	www.suva.ch, 01.01.2021
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	10 mg/m³

8.1.2. Recommended monitoring procedures

No additional information available.

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8.1.3. Air contaminants formed

No additional information available.

8.1.4. DNEL and PNEC

No additional information available.

8.1.5. Control banding

No additional information available.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Industrial and professional. Perform risk assessment prior to use. Provide local exhaust or general room ventilation.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. EN 166.

8.2.2.2. Skin protection

Skin and body protection:

Long sleeved protective clothing.

Hand protection:

Wear protective gloves. Wear water impervious gloves. Neoprene gloves. Nitrile rubber gloves. Butyl rubber gloves. EN 374.

8.2.2.3. Respiratory protection

Respiratory protection:

None under normal use. If mist is formed, Use an approved respirator equipped with oil/mist cartridges. EN 136/140.

8.2.2.4. Thermal hazards

No additional information available.

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colorless
Appearance	: Clear viscous liquid
Odour	: Odorless
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 5 (100 g/L aqueous solution)

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Viscosity, kinematic	: Not 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 Kow	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Glycerol (glycerin, glycerine) (56-81-5)	
LD50 Oral rat	27200 mg/kg bodyweight Animal: rat, Animal sex: female
LD50 Oral	18300 mg/kg rat

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Glycerol (glycerin, glycerine) (56-81-5)	
LD50 Dermal rabbit	> 10000 mg/kg
LC50 Inhalation rat	5.85 mg/l air Animal: rat
LC50 Inhalation rat (vapours)	> 2.75 mg/l Source: ECHA

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 5 (100 g/L aqueous solution)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 5 (100 g/L aqueous solution)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.
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11.2.2. Other information

Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

Glycerol (glycerin, glycerine) (56-81-5)	
LC50 fish	54000 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>)
LC50 - fish	51000 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (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.

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Glycerol (glycerin, glycerine) (56-81-5)

Log Pow

-1.75 Source: ECHA

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

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This mixture does not meet the PBT criteria of REACH regulation, annex XIII.

This mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

Additional information

: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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 ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR)

: Not regulated

UN-No. (IMDG)

: Not regulated

UN-No. (IATA)

: Not regulated

UN-No. (ADN)

: Not regulated

UN-No. (RID)

: Not regulated

14.2. UN proper shipping name

Proper Shipping Name (ADR)

: Not regulated

Proper Shipping Name (IMDG)

: Not regulated

Proper Shipping Name (IATA)

: Not regulated

Proper Shipping Name (ADN)

: Not regulated

Proper Shipping Name (RID)

: Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)

: Not regulated

IMDG

Transport hazard class(es) (IMDG)

: Not regulated

IATA

Transport hazard class(es) (IATA)

: Not regulated

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ADN

Transport hazard class(es) (ADN) : Not regulated

RID

Transport hazard class(es) (RID) : Not regulated

14.4. Packing group

Packing group (ADR) : Not regulated

Packing group (IMDG) : Not regulated

Packing group (IATA) : Not regulated

Packing group (ADN) : Not regulated

Packing group (RID) : Not regulated

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Twelfth Ordinance on the Implementation of the Federal Immission Control Act (12. BImSchV) : Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

ABM category : B(4) - low hazard for aquatic organisms

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

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SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Switzerland

Storage class (LK) : LK 10/12 - Liquids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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
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

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Abbreviations and acronyms:	
N.O.S.	Not Otherwise Specified
OECD	Organisation 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
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

Data sources : Internal Company test data. Manufacturer Information.
Other information : None.

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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ThawSTAR Confirmation Vial SDS EU

Collaboration Step

Name/Signature	Title	Date	Meaning/Reason
Michele Haler (MHALER)	Quality Engineer	22 Sep 2026, 12:54:56 PM	Complete

Department Approval

Name/Signature	Title	Date	Meaning/Reason
Bill Yang (BYANG)	Product Manager	28 Sep 2026, 08:32:37 AM	Approved

Quality Approval

Name/Signature	Title	Date	Meaning/Reason
Brittany Bentcover (BBENTCOVER)	Director of Quality - Media	25 Sep 2026, 03:53:02 PM	Approved

Training Approval

Name/Signature	Title	Date	Meaning/Reason
Mallory Wessel (MWESSEL)	Sr QA Manager	29 Sep 2026, 08:10:43 AM	Approved

Document Control Approval

Name/Signature	Title	Date	Meaning/Reason
Mallory Wessel (MWESSEL)	Sr QA Manager	29 Sep 2026, 08:11:11 AM	Approved

Notification

Name/Signature	Title	Date	Meaning/Reason
Michele Haler (MHALER)	Quality Engineer	29 Sep 2026, 08:11:12 AM	Email Sent