

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
And According To The Hazardous Products Regulation (February 11, 2015).

SECTION 1: IDENTIFICATION

1.1 Product Identifier

Product Form: Mixture

Product Name: HypoThermosol® FRS

Synonyms: HTS-FRS

1.2. Intended Use of the Product

Hypothermic storage of biological material.

1.3. Name, Address, and Telephone of the Responsible Party

Company

BioLife Solutions, Inc.

3303 Monte Villa Parkway

Suite 310

Bothell, WA 98021

425-402-1400

www.biolifesolutions.com

1.4. Emergency Telephone Number

Emergency Number: 425-402-1400

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Not classified

2.2. Label Elements

GHS-US/CA Labeling

No labeling applicable

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions

2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture*

Name	Product Identifier	% **	GHS Ingredient Classification
Sucrose	(CAS-No.) 57-50-1	1	Comb. Dust
Sodium hydroxide***	(CAS-No.) 1310-73-2	0.6	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Potassium hydroxide***	(CAS-No.) 1310-58-3	0.168	Met. Corr. 1, H290 Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 1, H370

Full text of H-phrases: see section 16

*Additional proprietary components do not contribute to the overall hazard classification.

**Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

*** Components are added to adjust pH, are neutralized, and do not contribute to the overall hazard classification.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: May cause slight irritation to eyes.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

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SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising from the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions. Hazardous reactions may occur on contact with certain chemicals. Refer to incompatible materials.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Remove containers from fire area if this can be done without risk. Do not breathe fumes from fires or vapors from decomposition.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Irritating or toxic vapors. Carbon oxides (CO, CO₂). Nitrogen oxides. Sodium oxides. Hydrogen chloride. Potassium oxides. Phosphorous oxide. Calcium oxides. Magnesium oxides.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid breathing (vapor, mist, spray). Avoid all contact with skin, eyes, or clothing.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Contains substances that are combustible dusts. If dried and allowed to accumulate, may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, and spray. Use appropriate personal protective equipment (PPE).

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Strong reducing agents. Halogenated organic and mineral acids. Halides. Metal salts. Zinc. Steel. Some plastics. Acid chlorides. Maleic anhydride. Water reactive materials.

Storage Temperature: 2 - 8 °C

7.3. Specific End Use(s)

Hypothermic storage of biological material.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Sucrose (57-50-1)		
Mexico	OEL TWA (mg/m ³)	10 mg/m ³
Mexico	OEL STEL (mg/m ³)	20 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
Alberta	OEL TWA (mg/m ³)	10 mg/m ³
British Columbia	OEL TWA (mg/m ³)	10 mg/m ³ (total dust) 3 mg/m ³ (respirable fraction)
Manitoba	OEL TWA (mg/m ³)	10 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	10 mg/m ³
Newfoundland & Labrador	OEL TWA (mg/m ³)	10 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	10 mg/m ³
Nunavut	OEL STEL (mg/m ³)	20 mg/m ³
Nunavut	OEL TWA (mg/m ³)	10 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	20 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	10 mg/m ³
Ontario	OEL TWA (mg/m ³)	10 mg/m ³
Prince Edward Island	OEL TWA (mg/m ³)	10 mg/m ³
Québec	VEMP (mg/m ³)	10 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	20 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	10 mg/m ³
Yukon	OEL STEL (mg/m ³)	20 mg/m ³
Yukon	OEL TWA (mg/m ³)	30 mppcf 10 mg/m ³

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Sodium hydroxide (1310-73-2)		
Mexico	OEL Ceiling (mg/m ³)	2 mg/m ³
USA ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³
USA IDLH	US IDLH (mg/m ³)	10 mg/m ³
Alberta	OEL Ceiling (mg/m ³)	2 mg/m ³
British Columbia	OEL Ceiling (mg/m ³)	2 mg/m ³
Manitoba	OEL Ceiling (mg/m ³)	2 mg/m ³
New Brunswick	OEL Ceiling (mg/m ³)	2 mg/m ³
Newfoundland & Labrador	OEL Ceiling (mg/m ³)	2 mg/m ³
Nova Scotia	OEL Ceiling (mg/m ³)	2 mg/m ³
Nunavut	OEL Ceiling (mg/m ³)	2 mg/m ³
Northwest Territories	OEL Ceiling (mg/m ³)	2 mg/m ³
Ontario	OEL Ceiling (mg/m ³)	2 mg/m ³
Prince Edward Island	OEL Ceiling (mg/m ³)	2 mg/m ³
Québec	PLAFOND (mg/m ³)	2 mg/m ³
Saskatchewan	OEL Ceiling (mg/m ³)	2 mg/m ³
Yukon	OEL Ceiling (mg/m ³)	2 mg/m ³

Potassium hydroxide (1310-58-3)		
USA ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³
Alberta	OEL Ceiling (mg/m ³)	2 mg/m ³
British Columbia	OEL Ceiling (mg/m ³)	2 mg/m ³
Manitoba	OEL Ceiling (mg/m ³)	2 mg/m ³
New Brunswick	OEL Ceiling (mg/m ³)	2 mg/m ³
Newfoundland & Labrador	OEL Ceiling (mg/m ³)	2 mg/m ³
Nova Scotia	OEL Ceiling (mg/m ³)	2 mg/m ³
Nunavut	OEL Ceiling (mg/m ³)	2 mg/m ³
Northwest Territories	OEL Ceiling (mg/m ³)	2 mg/m ³
Ontario	OEL Ceiling (mg/m ³)	2 mg/m ³
Prince Edward Island	OEL Ceiling (mg/m ³)	2 mg/m ³
Québec	PLAFOND (mg/m ³)	2 mg/m ³
Saskatchewan	OEL Ceiling (mg/m ³)	2 mg/m ³
Yukon	OEL Ceiling (mg/m ³)	2 mg/m ³

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8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles.

Materials for Protective Clothing: Chemically resistant materials and fabrics.



Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles.

Skin and Body Protection: In laboratory, medical or industrial settings, impervious disposable gloves and protective clothing are recommended if skin contact with the product is possible.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	Liquid
Appearance	Clear/colorless to slightly yellow
Odor	Odorless
Odor Threshold	Not Available
pH	7.5 - 7.7
Evaporation Rate	Not Available
Melting Point	Not Available
Freezing Point	Not Available
Boiling Point	Not Available
Flash Point	Not Available
Auto-ignition Temperature	Not Available
Decomposition Temperature	Not Available
Flammability (solid, gas)	Not Applicable
Lower Flammable Limit	Not Available
Upper Flammable Limit	Not Available
Vapor Pressure	Not Available
Relative Vapor Density at 20°C	Not Available
Relative Density	Not Available
Specific Gravity	1.05
Solubility	Soluble in water
Partition Coefficient: N-Octanol/Water	Not Available
Viscosity	Not Available

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions. Hazardous reactions may occur on contact with certain chemicals. Refer to incompatible materials.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers. Strong reducing agents. Halogenated organic and mineral acids. Methyl bromide, sodium hydride. Halides. Metal salts of oxoacids. Metal salts. Zinc. Steel. Some plastics. Acid chlorides. Boron compounds. Maleic anhydride. Water reactive materials.

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 Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified.

pH: 7.5 - 7.7

Eye Damage/Irritation: Not classified.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None known.

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11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Sucrose (57-50-1)	
LD50 Oral Rat	29700 mg/kg
Potassium hydroxide (1310-58-3)	
LD50 Oral Rat	284 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology – General: Not Classified

Sodium hydroxide (1310-73-2)	
LC50 Fish 1	45.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	40 mg/l

12.2. Persistence and Degradability

HypoThermosol® FRS	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

HypoThermosol® FRS	
Bioaccumulative Potential	Not established.
Potassium hydroxide (1310-58-3)	
Log Pow	0.65

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

- 14.1. In Accordance with DOT** Not regulated for transport
- 14.2. In Accordance with IMDG** Not regulated for transport
- 14.3. In Accordance with IATA** Not regulated for transport
- 14.4. In Accordance with TDG** Not regulated for transport

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SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Sucrose (57-50-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sodium hydroxide (1310-73-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	1000 lb
Potassium hydroxide (1310-58-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	1000 lb

15.2. US State Regulations

Sucrose (57-50-1)	
U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List	
Sodium hydroxide (1310-73-2)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	
Potassium hydroxide (1310-58-3)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	

15.3. Canadian Regulations

Sucrose (57-50-1)	
Listed on the Canadian DSL (Domestic Substances List)	
Sodium hydroxide (1310-73-2)	
Listed on the Canadian DSL (Domestic Substances List)	
Potassium hydroxide (1310-58-3)	
Listed on the Canadian DSL (Domestic Substances List)	

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SECTION 16: OTHER INFORMATION

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
H290	May be corrosive to metals
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H370	Causes damage to organs
H402	Harmful to aquatic life

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.
NA GHS SDS 2015 (Can, US, Mex)