

## SAFETY DATA SHEET

**Product Name: BloodStor<sup>®</sup> 100**

SDS Date: 18 August 2015

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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Product Name: BloodStor<sup>®</sup> 100  
Synonyms: N/A  
Product Codes: 410301, 410302  
Manufacturer: BioLife Solutions, Inc.  
Address: 3303 Monte Villa Pkwy, Suite 310, Bothell, WA 98021 USA  
Emergency Phone: 911  
Other Calls: 866.424.6543  
Fax: 425.402.1433  
Product Use: Ultra low temperature (-70<sup>o</sup>to -196<sup>o</sup>C) storage of biological material (cells, tissues, and organs)

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### SECTION 2: HAZARDS IDENTIFICATION

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GHS Classification: Combustible liquid

GHS Label:

Pictogram:



Signal Word:

Warning

Hazard Statements:

H227 Combustible liquid.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary Statements:

P210 Keep away from heat/sparks/open flames/hot surfaces-No smoking.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/eye protection/face protection.

Response:

If on Skin: P302 & 352 Wash with plenty of soap and water.

If in Eyes: P305, 351, & 338 Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

If on Cloths: P362 Take off contaminated clothing and wash before reuse.

Storage:

P403 & 235 Store in a well ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/container in accordance with local/national regulations.

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

None

Physical Appearance:

Clear liquid

Routes of Entry:

Oral, Skin, Eyes

Odor:

Essentially Odorless

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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Ingredient:

Dimethyl Sulfoxide (DMSO)

CAS NO: 67-68-5

MF: C<sub>2</sub>H<sub>6</sub>O<sub>S</sub>

%Vol 99%+

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## SECTION 4: FIRST AID MEASURES

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General:	Never give fluids or induce vomiting if patient is unconscious or is having convulsions. When symptoms persist, seek medical attention.
NOTE:	BloodStor® 100 in general is not dangerous to people, but like any other chemical; it should be treated with care, respect, and common sense.
Eyes:	Flush with running water for >15 minutes.
Skin:	Wash skin thoroughly with soap and water. Wash contaminated clothing before reuse.
Ingestion:	Seek immediate medical attention. Do NOT induce vomiting.
Inhalation:	Remove to fresh air. If breathing has stopped, provide artificial respiration. Keep the victim warm and seek medical attention.

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## SECTION 5: FIRE-FIGHTING MEASURES

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*100% DMSO HAS COMBUSTIBLE LIQUID AND VAPOR.*

Extinguishing Media:	Foam, carbon dioxide, dry powder, and water spray
Special Protective Equipment:	Wear a Self-Contained Breathing Apparatus (SCBA) rubber gloves, rubber suit
Special Exposure Hazards:	Burning product may produce poisonous gasses (sulfur oxides)
Flashpoint:	89°C (192°F) closed cup; 95°C (203°F) open cup
ERG Guide Number:	128

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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Personal Precautions:	In case of mist formation, use a respirator or Self-Contained Breathing Apparatus (SCBA). Wear appropriate PPE (see Section 8).
Spills:	Consult environmental supervisor. Remove ignition sources. Ventilate the area. Do not breathe vapor or get liquid on skin/eyes/clothing.
Disposal:	Observe all local waste regulations prior to disposal. Dilute and flush to wastewater treatment or absorb with inert material. Do not allow to enter streams or waterways.

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## SECTION 7: HANDLING AND STORAGE

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Handling:	Keep away from sources of ignition. Use good laboratory practices while handling. Avoid inhaling vapors or mist. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Wear appropriate PPE (see Section 8).
Storage:	Keep container tightly closed, in a well-ventilated place. Freezes (solidifies) at 18°C (64°F). Prolonged heating above 150°C (302°F) can cause rapid, exothermic decomposition. Store in accordance with National Fire Protection Association's publication NFPA 30, Flammable and Combustible Liquids Code. 29 CFR1910.106.
Engineering Controls:	NA

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## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

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Engineering Controls:	NA
Ventilation:	NA
Respiratory Protection:	This material does not have established workplace exposure limits. Wear an appropriate NIOSH/MSHA approved air purifying respirator or positive pressure air supplied respirator in situations where a respirator is judged appropriate to prevent inhalation of vapors or mist.
Eye Protection:	Chemical laboratory safety goggles or as recommended by internal laboratory.
Skin Protection:	Latex/Non-Latex gloves or as recommended by internal laboratory.
Other Protective Clothing or Equipment:	Wear impervious clothing such as apron, boots, jumpsuit, or whole body suit as appropriate to avoid exposure.
Work Hygienic Practices:	Use good laboratory precautions and practices. Wash hands following handling of material.
Exposure Guidelines:	Wash exposed area thoroughly. Refer to Section 4 First Aid Measures for details.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance:	Colorless liquid	Vapor Density (Air=1):	2.7
Odor:	Essentially odorless	Specific Gravity (H <sub>2</sub> O=1):	1.1 at 20°C (68°F)
Odor Threshold:	Not available	Solubility in Water at 20°C:	Miscible
pH:	8.5 (50/50 in water)	Octanol/Water Partition Coefficient:	logP <sub>ow</sub> = -2.03
Melting Point:	18°C (64°F)	Viscosity at 25°C (77°F):	2.0 mPas or cP
Boiling Point:	189°C (372°F)	Decomposition temperature:	Not measured
Flashpoint and method:	89°C (192°F) closed cup 95°C (203°F) open cup	Evaporation Rate:	0.026 (n-butyl acetate=1)
Flammability (solid, gas):	Not applicable	Sensitivity to Static Discharge:	Material is unlikely to accumulate a static charge, which could act as an ignition source.
Flammable Limits (% in air):	LEL: 3.0 – 3.5% by volume UEL: 42-63% by volume		
Auto-ignition Temperature:	300-302°C (572-575°F)		
Vapor Pressure:	0.55 mbar (0.46 mmHg) @ 20°C (68°F)		

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**SECTION 10: STABILITY AND REACTIVITY**

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Reactivity:	Hazardous polymerization will not occur
Stability:	Stable
Possibility of Hazardous Reactions:	No data available
Conditions to Avoid:	Prolonged heating above 150°C (302°F) can cause rapid, exothermic decomposition
Incompatibility (Material to Avoid):	Organic and inorganic acid chlorides, strong oxidizing agents, alkali metals, hydrobromic acid, acidic solutions of alkali bromides
Hazardous Decomposition Products:	Sulfur dioxide, formaldehyde, methyl mercaptan, dimethyl sulfide, dimethyl disulfide, and bis (methylthio) methane.
Hazardous Polymerization:	Will not occur. No stabilizers are needed or present.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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Acute Toxicity:	LD50 Oral – rat: 14,500 mg/kg LC50 Inhalation – rat: 40250 ppm LD50 Dermal – rabbit: > 5,000 mg/kg, Category 5
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**SECTION 12: ECOLOGICAL INFORMATION**

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Aquatic Toxicity:	LC50 - Pimephales promelas (fathead minnow): 34,000 mg/l: 96 h LC50 - Oncorhynchus mykiss (rainbow trout): 35,000 mg/l: 96 h EC50 - Daphnia pulex (Water flea): 27,500 mg/l
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	Not measured.
Mobility in Soil:	No data available.
Other Adverse Effects:	Biological Oxygen Demand: Theoretical Oxygen Demand at 10ppm: 123mg oxygen Chemical Oxygen Demand at 10ppm: 107mg/L Biological Oxygen Demand-5 at 10ppm: ≤1.0mg/L

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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Waste Disposal Method:	Observe all federal, state, and local environmental regulations.
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**SECTION 14: TRANSPORT INFORMATION**

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	<b>DOT (Domestic Surface Transportation)</b>	<b>IMO/IMDG (Ocean Transportation)</b>	<b>IMO/IMDG (Ocean Transportation)</b>
UN Number:	>119 gallons: NA1993 <119 gallons: Not regulated	Not regulated	Not regulated
UN Proper Shipping Name:	BloodStor®100	Not regulated	Not regulated
Transportation Hazard Class:	DOT Hazard Class: 3 DOT Label: Combustible Liquid <119 gallons: Not regulated >119 gallons: Combustible	Not applicable	Not applicable
Packing group:	III	Not applicable	Not applicable

Environmental Hazard: Marine Pollutant: No  
Special Precautions for User: No further information

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**SECTION 15: REGULATORY INFORMATION**

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WHMIS Classification: B3 D2B  
US EPA Tier II Hazards: Fire: Yes  
Sudden Release of Pressure: No  
Reactive: No  
Immediate (acute): Yes  
Delayed (Chronic): No

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**SECTION 16: OTHER INFORMATION**

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Other Information: The data on this Safety Data Sheet relate only to the specific material herein and do not relate to use in combination with any other material or process.

Preparation Information: This information is believed to be accurate and represents the best information available to date.

Disclaimer: We make no warranty or assume any liability from its use. Users should make their own investigations to determine the suitability of the information.