
SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Name : BloodStor® 27 NaCl

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Ultra-low temperature storage of biological material.
Restrictions on use : Any use not specified.

1.4. Supplier's details

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

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

Other hazards not contributing to the classification : Exposure may aggravate pre-existing eye, skin, or respiratory conditions. DMSO easily penetrates the skin, and may increase the rate of skin absorption of skin-permeable substances.

2.5. Unknown acute toxicity

No additional information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Name	Product identifier	%	GHS classification
Dimethyl sulfoxide (DMSO)	CAS-No.: 67-68-5	10 – 30	Flam. Liq. 4, H227

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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 exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow the victim to rest. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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

Symptoms/effects	: Exposure may aggravate pre-existing eye, skin, or respiratory conditions.
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions. DMSO easily penetrates the skin, and may increase the rate of skin absorption of skin-permeable substances.
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.
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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	: The product is not flammable.
Explosion hazard	: Product is not explosive.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. 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.
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For non-emergency personnel

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

For emergency responders

Protective equipment	: Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
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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	: Stop leak, if possible without risk. 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	: 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. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	: Keep container closed when not in use. Keep cool. Protect from sunlight.
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. Water reactive materials.
Storage temperature	: 2 – 25 °C
Packaging materials	: Always store product in container of same material as original container. Do not re-use empty containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dimethyl sulfoxide (DMSO) (67-68-5)	
USA - AIHA - Occupational Exposure Limits	
WEEL TWA	250 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls	: Industrial and professional. Perform risk assessment prior to use. Ensure good ventilation of the work station.
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. Avoid all unnecessary exposure.

Hand protection:
Wear protective gloves. Neoprene. Butyl rubber.
Eye protection:
Chemical goggles or safety glasses.

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Skin and body protection:

Long sleeved protective clothing.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. If needed, use an air-purifying respirator with organic vapor cartridges and a dust/mist prefilter.

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
Color	: Colorless
Odor	: Odorless
Odor threshold	: No data available
pH	: 4 – 7
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Soluble in 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
Explosive properties	: Product is not explosive
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 of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizers. Strong reducing agents. Halogenated organic and mineral acids. Methylbromide. Sodium hydride. Halides. Metal salts of oxoacids. Metal salts. Zinc. Steel. Some plastics. Acid chlorides. Boron compounds. Water reactive materials.

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10.6. Hazardous decomposition products

Fumes. Carbon monoxide. Carbon dioxide.

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

Dimethyl sulfoxide (DMSO) (67-68-5)	
LD50 Oral rat	28300 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 Dermal rat	≈ 40000 mg/kg body weight Animal: rat
LC50 Inhalation rat	> 5.33 mg/l Source: ECHA
ATE (oral)	28300 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: 4 – 7

Dimethyl sulfoxide (DMSO) (67-68-5)	
Skin corrosion/irritation	Not irritating to rabbits on cutaneous application.
Skin corrosion/irritation, Human experience	Slightly irritating to the skin.

Serious eye damage/irritation : Not classified
pH: 4 – 7

Dimethyl sulfoxide (DMSO) (67-68-5)	
Serious eye damage/irritation	Not irritating to rabbits on ocular application.
Serious eye damage/irritation, Human experience	Slightly irritating to eyes.

Respiratory or skin sensitization : Not classified

Dimethyl sulfoxide (DMSO) (67-68-5)	
Skin sensitization, Guinea pig, mouse	No sensitization responses were observed.

Germ cell mutagenicity : Not classified

Dimethyl sulfoxide (DMSO) (67-68-5)	
Additional information	Negative (Bacterial reverse mutation assay (e.g. Ames test), Chromosomal aberration test, Micronucleus test)

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Dimethyl sulfoxide (DMSO) (67-68-5)	
NOAEL OECD 421, Oral, rat	1000 mg/kg bw/day (Fertility, mating)
NOAEL OECD 414, Developmental, maternal, Oral, gavage, rat	1000 mg/kg bw/day (Lower fetal weight)
NOAEL, Developmental, maternal, Oral, gavage, rabbit	1000 mg/kg bw/day (Loss of weight)

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

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Dimethyl sulfoxide (DMSO) (67-68-5)	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	2.783 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: EPA OPPTS 870.3465 (90-Day Inhalation Toxicity)
NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg body weight Animal: rat

Aspiration hazard : Not classified

BloodStor® 27 NaCl	
Viscosity, kinematic	No data available

Dimethyl sulfoxide (DMSO) (67-68-5)	
Viscosity, kinematic	No data available

Symptoms/effects : Exposure may aggravate pre-existing eye, skin, or respiratory conditions.
Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions. DMSO easily penetrates the skin, and may increase the rate of skin absorption of skin-permeable substances.
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

Dimethyl sulfoxide (DMSO) (67-68-5)	
LC50 fish	> 25 g/l Test organisms (species): <i>Danio rerio</i> (previous name: <i>Brachydanio rerio</i>)
EC50 crustacea	24.6 g/l Test organisms (species): <i>Daphnia magna</i>
EC50 other aquatic organisms	> 25000 mg/l 96 h <i>Danio rerio</i>
ErC50 algae	17000 mg/l 72 h <i>Pseudokirchneriella subcapitata</i>

12.2. Persistence and degradability

BloodStor® 27 NaCl	
Persistence and degradability	Not established.

Dimethyl sulfoxide (DMSO) (67-68-5)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	31 % 28 d

12.3. Bioaccumulative potential

BloodStor® 27 NaCl	
Bioaccumulative potential	Not established.

Dimethyl sulfoxide (DMSO) (67-68-5)	
Log Pow	-1.35 Source: ECHA
Log Kow	-1.35 @ 20 °C

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Dimethyl sulfoxide (DMSO) (67-68-5)

Bioaccumulative potential	Not expected to bioaccumulate.
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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 of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
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.
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14.6. Transport in bulk

Not applicable

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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
Dimethyl sulfoxide (DMSO)	67-68-5	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

Dimethyl sulfoxide (DMSO) (67-68-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Dimethyl sulfoxide (DMSO) (67-68-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Dimethyl sulfoxide (DMSO) (67-68-5)

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)

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

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Data sources : Internal Company test data. Manufacturer Information.

Full text of H-phrases	
H227	Combustible liquid
Abbreviations and acronyms	
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
Log Pow	Partition coefficient n-octanol/water (Log Pow)
N.O.S.	Not Otherwise Specified
TF	Technical function
TWA	Time Weighted Average

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

Document Number: SDS-0002

Revision: 04

Title: BloodStor® 27 NaCl Safety Data Sheet (NA)

Effective Date: 06 Oct 2026

All dates and times are in US/Pacific.

BloodStor® 27 NaCl Safety Data Sheet (NA)

Collaboration Step

Name/Signature	Title	Date	Meaning/Reason
Michele Haler (MHALER)	Quality Engineer	21 Sep 2026, 12:12:54 PM	Complete

Department Approval

Name/Signature	Title	Date	Meaning/Reason
Matthew Selley (MSELLEY)	Director Aseptic Form & Fill	21 Sep 2026, 12:36:41 PM	Approved

Quality Approval

Name/Signature	Title	Date	Meaning/Reason
Brittany Bentcover (BBENTCOVER)	Director of Quality - Media	21 Sep 2026, 02:40:47 PM	Approved

Training Approval

Name/Signature	Title	Date	Meaning/Reason
Misti Long (MLONG)	QA Specialist I	22 Sep 2026, 09:33:11 AM	Approved

Document Control Approval

Name/Signature	Title	Date	Meaning/Reason
Misti Long (MLONG)	QA Specialist I	22 Sep 2026, 09:40:40 AM	Approved

Notification

Name/Signature	Title	Date	Meaning/Reason
Sandy Jones (SJONES)	Senior Director of Customer Care & Sales Operations	22 Sep 2026, 09:40:41 AM	Email Sent
Bill Yang (BYANG)	Product Manager	22 Sep 2026, 09:40:41 AM	Email Sent
Matthew Selley (MSELLEY)	Director Aseptic Form & Fill	22 Sep 2026, 09:40:41 AM	Email Sent
Michele Haler (MHALER)	Quality Engineer	22 Sep 2026, 09:40:41 AM	Email Sent
Prashant Patel (PPATEL)	Senior Manager -- Supply Chain	22 Sep 2026, 09:40:41 AM	Email Sent
Laura Renn (LRENN)	Sr Manager Supply Chain Ops	22 Sep 2026, 09:40:41 AM	Email Sent