

## SECTION 1: Identification

### 1.1. Product identifier

Product form : Mixture  
Name : CryoStor CS2; CryoStor CS5

### 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

|                                               |      |                                |
|-----------------------------------------------|------|--------------------------------|
| Skin corrosion/irritation, Category 2         | H315 | Causes skin irritation.        |
| Serious eye damage/eye irritation, Category 2 | H319 | Causes serious eye irritation. |
| Full text of H statements : see section 16    |      |                                |

### 2.2. Label elements

#### GHS labeling

Hazard pictograms (GHS) :



Signal word (GHS) : Warning  
Hazard statements (GHS) : H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
Precautionary statements (GHS) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear protective gloves.  
P302+P352 - If on skin: Wash with plenty of soap and water.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313 - If skin irritation occurs: Get medical advice, Get medical attention.  
P337+P313 - If eye irritation persists: Get medical advice, Get medical attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P370+P378 - In case of fire: Use media other than water to extinguish.  
P403 - Store in a well-ventilated place.

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P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 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   | 3 – 10  | Flam. Liq. 4, H227                                            |
| Sodium hydroxide          | CAS-No.: 1310-73-2 | 0.1 – 1 | Met. Corr. 1, H290<br>Skin Corr. 1A, H314<br>Eye Dam. 1, H318 |
| Potassium hydroxide       | CAS-No.: 1310-58-3 | 0.1 – 1 | Acute Tox. 4 (Oral), H302<br>Skin Corr. 1A, H314              |

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. 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

Potential Adverse human health effects and symptoms : Causes serious eye irritation. Causes skin irritation.  
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 : Causes skin irritation. DMSO easily penetrates the skin, and may increase the rate of skin absorption of skin-permeable substances.  
Symptoms/effects after eye contact : Causes serious eye irritation.  
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.

##### 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. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal 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 : Stop leak, if possible without risk. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Absorb spilled material with sand or earth.  
Methods for cleaning up : Take up liquid spill into absorbent material. 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.  
Additional hazards when processed : Keep away from Sources of ignition. - No smoking. Handle empty containers with care because residual vapors are flammable.

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### 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. Maleic anhydride. Water reactive materials. Sources of ignition. Direct sunlight. Heat sources. |
| Storage temperature    | : 2 – 8 °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

|                                                   |                                                                         |
|---------------------------------------------------|-------------------------------------------------------------------------|
| <b>Dimethyl sulfoxide (DMSO) (67-68-5)</b>        |                                                                         |
| <b>USA - AIHA - Occupational Exposure Limits</b>  |                                                                         |
| WEEL TWA                                          | 250 ppm                                                                 |
| <b>Sodium hydroxide (1310-73-2)</b>               |                                                                         |
| <b>USA - ACGIH - Occupational Exposure Limits</b> |                                                                         |
| Local name                                        | Sodium hydroxide                                                        |
| ACGIH <sup>®</sup> TLV <sup>®</sup> C             | 2 mg/m <sup>3</sup>                                                     |
| Remark (ACGIH <sup>®</sup> )                      | TLV <sup>®</sup> Basis: Eye, Skin & URT irr                             |
| Regulatory reference                              | ACGIH 2025                                                              |
| <b>USA - OSHA - Occupational Exposure Limits</b>  |                                                                         |
| Local name                                        | Sodium hydroxide                                                        |
| OSHA PEL TWA                                      | 2 mg/m <sup>3</sup>                                                     |
| Regulatory reference (US-OSHA)                    | OSHA Annotated Table Z-1                                                |
| <b>USA - NIOSH - Occupational Exposure Limits</b> |                                                                         |
| Local name                                        | Sodium hydroxide                                                        |
| NIOSH REL C                                       | 2 mg/m <sup>3</sup> Exposure Limits exposure limit values               |
| Regulatory reference (US-NIOSH)                   | OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG)) |
| <b>Mexico - Exposure limit values</b>             |                                                                         |
| Connotation                                       | P                                                                       |
| VLE – CT o P                                      | 2 mg/m <sup>3</sup>                                                     |
| <b>Potassium hydroxide (1310-58-3)</b>            |                                                                         |
| <b>USA - ACGIH - Occupational Exposure Limits</b> |                                                                         |
| Local name                                        | Potassium hydroxide                                                     |
| ACGIH <sup>®</sup> TLV <sup>®</sup> C             | 2 mg/m <sup>3</sup>                                                     |
| Remark (ACGIH <sup>®</sup> )                      | TLV <sup>®</sup> Basis: URT, eye, & skin irr                            |
| Regulatory reference                              | ACGIH 2021                                                              |
| <b>USA - NIOSH - Occupational Exposure Limits</b> |                                                                         |
| NIOSH REL C                                       | 2 mg/m <sup>3</sup>                                                     |

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| Potassium hydroxide (1310-58-3) |                     |
|---------------------------------|---------------------|
| Mexico - Exposure limit values  |                     |
| Connotation                     | P                   |
| VLE – CT o P                    | 2 mg/m <sup>3</sup> |

### 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.

|                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hand protection:</b>                                                                                                                                                       |
| Wear protective gloves. Wear water impervious gloves. Neoprene. Butyl rubber.                                                                                                 |
| <b>Eye protection:</b>                                                                                                                                                        |
| Chemical goggles or safety glasses.                                                                                                                                           |
| <b>Skin and body protection:</b>                                                                                                                                              |
| Long sleeved protective clothing.                                                                                                                                             |
| <b>Respiratory protection:</b>                                                                                                                                                |
| 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 or slightly yellow |
| Odor                           | : Slight odor                  |
| Odor threshold                 | : No data available            |
| pH                             | : 7.5 – 7.7                    |
| Melting point                  | : Not applicable               |
| 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     |

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Particle characteristics : No data available

### Sodium hydroxide

|                          |                   |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

### Potassium hydroxide

|                          |                   |
|--------------------------|-------------------|
| 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. 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

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 |
|------------|-------------------------|

### Potassium hydroxide (1310-58-3)

|               |                       |
|---------------|-----------------------|
| LD50 Oral rat | 333 mg/kg body weight |
|---------------|-----------------------|

|            |                       |
|------------|-----------------------|
| ATE (oral) | 500 mg/kg body weight |
|------------|-----------------------|

Skin corrosion/irritation : Causes skin irritation.  
pH: 7.5 – 7.7

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| 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.                                                                                                                                     |
| Sodium hydroxide (1310-73-2)                               |                                                                                                                                                                      |
| pH                                                         | 14 Source: GESTIS                                                                                                                                                    |
| Potassium hydroxide (1310-58-3)                            |                                                                                                                                                                      |
| pH                                                         | ≈ 13.5 Temp.: 25 °C Concentration: 5,611 g/L                                                                                                                         |
| Serious eye damage/irritation                              | : Causes serious eye irritation.<br>pH: 7.5 – 7.7                                                                                                                    |
| 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.                                                                                                                                         |
| Sodium hydroxide (1310-73-2)                               |                                                                                                                                                                      |
| pH                                                         | 14 Source: GESTIS                                                                                                                                                    |
| Potassium hydroxide (1310-58-3)                            |                                                                                                                                                                      |
| pH                                                         | ≈ 13.5 Temp.: 25 °C Concentration: 5,611 g/L                                                                                                                         |
| 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                                                                                                                                                     |
| 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, Guideline: other:                                                                                                              |
| Sodium hydroxide (1310-73-2)                               |                                                                                                                                                                      |
| NOAEC (inhalation, rat, gas, 90 days)                      | 50 ppm                                                                                                                                                               |
| Aspiration hazard                                          | : Not classified                                                                                                                                                     |

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| CryoStor CS2; CryoStor CS5                          |                                                                                                                                       |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Viscosity, kinematic                                | No data available                                                                                                                     |
| Dimethyl sulfoxide (DMSO) (67-68-5)                 |                                                                                                                                       |
| Viscosity, kinematic                                | No data available                                                                                                                     |
| Sodium hydroxide (1310-73-2)                        |                                                                                                                                       |
| Viscosity, kinematic                                | 0.119 mm <sup>2</sup> /s                                                                                                              |
| Potassium hydroxide (1310-58-3)                     |                                                                                                                                       |
| Viscosity, kinematic                                | No data available                                                                                                                     |
| Potential Adverse human health effects and symptoms | : Causes serious eye irritation. Causes skin irritation.                                                                              |
| 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                 | : Causes skin irritation. DMSO easily penetrates the skin, and may increase the rate of skin absorption of skin-permeable substances. |
| Symptoms/effects after eye contact                  | : Causes serious eye irritation.                                                                                                      |
| 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>                                           |
| Sodium hydroxide (1310-73-2)        |                                                                                                  |
| LC50 fish                           | > 84 mg/l                                                                                        |
| EC50 crustacea                      | 40.4 mg/l Test organisms (species): <i>Ceriodaphnia</i> sp.                                      |
| ErC50 algae                         | 240 mg/l                                                                                         |

### 12.2. Persistence and degradability

| CryoStor CS2; CryoStor CS5          |                            |
|-------------------------------------|----------------------------|
| Persistence and degradability       | Not established.           |
| Dimethyl sulfoxide (DMSO) (67-68-5) |                            |
| Persistence and degradability       | Not readily biodegradable. |
| Biodegradation                      | 31 % 28 d                  |

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| Sodium hydroxide (1310-73-2)    |                     |
|---------------------------------|---------------------|
| Persistence and degradability   | Rapidly degradable. |
| Potassium hydroxide (1310-58-3) |                     |
| Persistence and degradability   | Rapidly degradable. |

### 12.3. Bioaccumulative potential

| CryoStor CS2; CryoStor CS5          |                                |
|-------------------------------------|--------------------------------|
| Bioaccumulative potential           | Not established.               |
| Dimethyl sulfoxide (DMSO) (67-68-5) |                                |
| Log Pow                             | -1.35 Source: ECHA             |
| Log Kow                             | -1.35 @ 20 °C                  |
| Bioaccumulative potential           | Not expected to bioaccumulate. |
| Sodium hydroxide (1310-73-2)        |                                |
| Log Pow                             | -0.3                           |

### 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.

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### 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 |
|---------------------------|-----------|---------|-------------------|-------|
| Dimethyl sulfoxide (DMSO) | 67-68-5   | Present | Active            |       |
| Sodium hydroxide          | 1310-73-2 | Present | Active            |       |
| Potassium hydroxide       | 1310-58-3 | 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.

#### Sodium hydroxide (1310-73-2)

|           |         |
|-----------|---------|
| CERCLA RQ | 1000 lb |
|-----------|---------|

#### Potassium hydroxide (1310-58-3)

|           |         |
|-----------|---------|
| CERCLA RQ | 1000 lb |
|-----------|---------|

# CryoStor<sup>®</sup> CS2; CryoStor<sup>®</sup> CS5

## Safety Data Sheet

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### 15.2. International regulations

#### CANADA

|                                                       |
|-------------------------------------------------------|
| <b>Dimethyl sulfoxide (DMSO) (67-68-5)</b>            |
| Listed on the Canadian DSL (Domestic Substances List) |
| <b>Sodium hydroxide (1310-73-2)</b>                   |
| Listed on the Canadian DSL (Domestic Substances List) |
| <b>Potassium hydroxide (1310-58-3)</b>                |
| Listed on the Canadian DSL (Domestic Substances List) |

#### EU-Regulations

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| <b>Dimethyl sulfoxide (DMSO) (67-68-5)</b>                                                         |
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |
| <b>Sodium hydroxide (1310-73-2)</b>                                                                |
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

#### National regulations

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dimethyl sulfoxide (DMSO) (67-68-5)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Listed on INSQ (Mexican National Inventory of Chemical Substances)<br>Listed on KECI (Korean Existing Chemicals Inventory)<br>Listed on the TCSI (Taiwan Chemical Substance Inventory)<br>Listed on NZIoC (New Zealand Inventory of Chemicals)<br>Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory<br>Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)                                                                                                                                                                                                                                                                                                    |
| <b>Sodium hydroxide (1310-73-2)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)<br>Listed on the Chinese Catalog of Hazardous Chemicals.<br>Listed on KECL/KECI (Korean Existing Chemicals Inventory)<br>Listed on the TCSI (Taiwan Chemical Substance Inventory)<br>Listed on NZIoC (New Zealand Inventory of Chemicals)<br>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)<br>Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)<br>Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory<br>Listed on INSQ (Mexican National Inventory of Chemical Substances)<br>Listed on KECI (Korean Existing Chemicals Inventory) |
| <b>Potassium hydroxide (1310-58-3)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Listed on INSQ (Mexican National Inventory of Chemical Substances)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 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 : 2/18/2026

Data sources : Internal Company test data. Manufacturer Information.

# CryoStor® CS2; CryoStor® CS5

## 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

Other information : None.

| Full text of H-phrases     |                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------|
| H227                       | Combustible liquid                                                                              |
| H290                       | May be corrosive to metals                                                                      |
| H302                       | Harmful if swallowed                                                                            |
| H314                       | Causes severe skin burns and eye damage                                                         |
| H315                       | Causes skin irritation                                                                          |
| H318                       | Causes serious eye damage                                                                       |
| H319                       | Causes serious eye irritation                                                                   |
| 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)                                                 |

# CryoStor® CS2; CryoStor® CS5

## Safety Data Sheet

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| Abbreviations and acronyms |                                                                              |
|----------------------------|------------------------------------------------------------------------------|
| 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                                                       |
| 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

**Document Number:** SDS-0025

**Revision:** 02

**Title:** CryoStor® CS2: CS5 Safety Data Sheet (NA)

**Effective Date:** 06 Oct 2026

All dates and times are in US/Pacific.

### CryoStor® CS2: CS5 Safety Data Sheet (NA)

#### Collaboration Step

| Name/Signature         | Title            | Date                     | Meaning/Reason |
|------------------------|------------------|--------------------------|----------------|
| Michele Haler (MHALER) | Quality Engineer | 23 Sep 2026, 05:32:20 AM | Complete       |

#### Department Approval

| Name/Signature           | Title                        | Date                     | Meaning/Reason |
|--------------------------|------------------------------|--------------------------|----------------|
| Matthew Selley (MSELLEY) | Director Aseptic Form & Fill | 25 Sep 2026, 02:13:20 PM | Approved       |

#### Quality Approval

| Name/Signature                  | Title                       | Date                     | Meaning/Reason |
|---------------------------------|-----------------------------|--------------------------|----------------|
| Brittany Bentcover (BBENTCOVER) | Director of Quality - Media | 25 Sep 2026, 03:52:56 PM | Approved       |

#### Training Approval

| Name/Signature     | Title           | Date                     | Meaning/Reason |
|--------------------|-----------------|--------------------------|----------------|
| Misti Long (MLONG) | QA Specialist I | 25 Sep 2026, 04:30:44 PM | Approved       |

#### Document Control Approval

| Name/Signature     | Title           | Date                     | Meaning/Reason |
|--------------------|-----------------|--------------------------|----------------|
| Misti Long (MLONG) | QA Specialist I | 25 Sep 2026, 04:41:40 PM | Approved       |

#### Notification

| Name/Signature         | Title            | Date                     | Meaning/Reason |
|------------------------|------------------|--------------------------|----------------|
| Michele Haler (MHALER) | Quality Engineer | 25 Sep 2026, 04:41:41 PM | Email Sent     |