



AKRONBIOTECH

CryoSolve™

Safety Data Sheet

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

Date of Issue: 6/11/2018 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Name: CryoSolve™

Product Code: AK8217

1.2. Recommended use of the chemical and restrictions on use

Identified Uses: For research use or further manufacturing. For *in vitro* cell therapy application. The addition of cryopreservation media should be in accordance with facility and AABB guidelines.

Restricted Uses: Not intended for direct clinical use as a drug, therapeutic, biologic, or medical device.

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

Akron Biotechnology, LLC
6353 W Rogers Circle, Suite 2
Boca Raton, FL 33487
561-750-6120
www.akronbiotech.com
Email: info@akronbiotech.com

1.4. Emergency Telephone Number

Emergency Number: 561-750-6120

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Not a hazardous substance or mixture

2.2. Label Elements

Not a hazardous substance or mixture

2.3. Other Hazards

CryoSolve™ contains DMSO that easily penetrates the skin and may enhance the rate of skin absorption of skin-permeable substances.

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

No data available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable.

CryoSolve™

Safety Data Sheet

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

3.2. Mixture

Chemical Name	Common name and synonyms	%*	Product Identifier (CAS-No)
Dimethyl sulfoxide	DMSO	55	67-68-5
Water	N/A	40	7732-18-5
Dextran	N/A	5	9004-54-0

*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%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

Inhalation:

Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Seek medical advice if necessary.

Skin Contact:

Remove contaminated clothing. Rinse affected area with water for at least 5 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 if irritation develops or persists.

Ingestion:

Rinse mouth with water. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Inhalation:

May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Exposure to high concentrations of Dimethyl sulfoxide could cause lowering of consciousness. Repeated exposure to DMSO vapors did not cause any irritation to the respiratory tract; however, the exposure to high concentrations in the form of an aerosol induced an irritation of the upper airways after a repeated exposure.

Skin Contact:

May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching. DMSO may accelerate skin absorption of other materials.

Eye Contact:

May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. DMSO is slightly irritating for the eye. In humans, the instillation of solutions containing 50 to 100% DMSO has caused transient sensation of burning which was reversible within 24 hours.

Ingestion:

May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

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

Not applicable.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable extinguishing media: Small fire: Dry chemical, CO₂, water spray or regular foam.
Large fire: Water spray, fog or regular foam.

Unsuitable extinguishing media: Do not use straight streams.

5.2. Special Hazards Arising From the Substance or Mixture

100% DMSO is a combustible liquid and will be ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors will spread along ground and collect in low or confined areas (sewers, basements, tanks). Containers may explode when heated.

Potential Products of Combustion: Oxides of carbon. Oxides of sulphur.

5.3. Advice for Firefighters

Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. See Section 8 for more detail.

6.2. Environmental Precautions

Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and Materials for Containment and Cleaning Up

Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

6.4. Reference to Other Sections

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

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Do not swallow. Avoid breathing mist, vapors, or spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. See Section 8 for information on Personal Protective Equipment.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Store in a well-ventilated place. Keep cool. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

7.3. Specific End Use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

The product contains no substances with occupational exposure limit values 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.

CryoSolve™

Safety Data Sheet

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

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. Use explosion-proof electrical, ventilating, and lighting equipment. Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment (PPE):



Hand Protection:

Handle with gloves. Butyl or nitrile rubber gloves are recommended. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye Protection:

Use face shield, chemical goggles or safety glasses tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and Body Protection:

Wear protective clothing. Flame resistant clothing that meets the NFPA 2112 and CAN/CGSB 155.20 standards is recommended in areas where material is stored or handled. The type of protective equipment must be selected according to the concentration, amount of the hazardous substance at the specific workplace and appropriate risk assessment.

Respiratory Protection:

Respiratory protection is not required. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls:

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Appearance	: Clear, colorless liquid
Odor	: Odorless
Odor threshold	: Not available
pH	: 6.3-8.2
Melting point/freezing point	: Not available
Boiling point/boiling range	: Not available
Flash point	: Not available
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower flammable limit	: Not available
Upper flammable limit	: Not available

CryoSolve™

Safety Data Sheet

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

Vapor pressure	: Not available
Relative vapor density at 20°C	: Not available
Relative density	: Not available
Solubility	: Not available
Partition coefficient: N-Octanol/Water	: Not available
Auto-ignition temperature	: Not available
Viscosity	: Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Contact with incompatible materials. Sources of ignition. Exposure to heat.

10.2. Chemical Stability:

Stable under recommended handling and storage conditions (see Section 7).

10.3. Possibility of Hazardous Reactions:

No data available.

10.4. Conditions to Avoid:

Contact with incompatible materials. Sources of ignition. Exposure to heat.

10.5. Incompatible Materials:

Strong oxidizers. Perchlorates.

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

There is no data available indicating acute toxicity.

Inhalation Exposure	: Not classified
Ingestion Exposure	: Not classified
Skin Exposure	: Not classified
Eye Exposure	: Not classified
Germ Cell Mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive Toxicity	: Not classified
Specific Target Organ Toxicity (Single Exposure)	: Not classified
Specific Target Organ Toxicity (Repeated Exposure)	: Not classified
Aspiration Hazard	: Not classified

Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀ inhalation
Dimethyl sulfoxide	67-68-5	14500 mg/kg (rat)	40000 mg/kg (rat)	> 5330 mg/m ³ (rat); 4H

DMSO may accelerate skin absorption of other materials.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Ecotoxicity

No data available.

12.2. Persistence and Degradability

No data available.

12.3. Bioaccumulative Potential

No data available.

12.4. Mobility in Soil

No data available.

12.5. Other Adverse Effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Treatment of waste per local authority regulations. Empty containers may retain product residues. Avoid disposal of material into untreated sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional, national and local authority requirements.

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.

UN number	:	No data available
UN proper shipping name	:	No data available
Transport hazard class	:	No data available
Packing group	:	No data available
Environment Hazards	:	No data available
Special precautions for user	:	No data available
Transport in bulk	:	No data available

SECTION 15: REGULATORY INFORMATION

SARA 302 Components

This product does not contain any chemical components subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This product does not contain any chemical components subject to the reporting requirements of SARA Title III, Section 313.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	:	No
Chronic Health Hazard	:	No
Fire Hazard	:	No
Sudden Release of Pressure Hazard	:	No
Reactive Hazard	:	No

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State Right-to-Know Components

New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Dimethyl sulfoxide (DMSO)	67-68-5	Special Health Hazard Substance

California Prop. 65 Components

This product does not contain any chemical components subject to Proposition 65.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 6/11/2018

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).

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Akron Biotechnology, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.

NA GHS SDS 2015 (Can, US, Mex)