90133, 90132

SAFETY DATA SHEET

Issuing Date: 22-May-2019 **Version** 2

Vitrification Freeze Kit (Vit Kit - Freeze), Vitrification Solution-VS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Vitrification Freeze Kit (Vit Kit - Freeze), Vitrification Solution-VS
Product code	90133, 90132
Product Use	Laboratory chemicals.

Manufactured by
FUJIFILM Irvine Scientific, Inc.
2511 Daimler Street
Santa Ana, CA 92705
U.S.A.

SDSs are available at the following website(s):	http://www.irvinesci.com
Company Phone Number	Technical: 800-437-5706 Fax: 949-261-6522
Emergency Telephone	Transport-CHEMTREC Inside NA: 800-424-9300 Transport-CHEMTREC Outside NA: 703-527-3887 Transport-CANUTEC Inside Canada: 613-996-6666 Medical Emergency (24 hour): 877-935-7387
E-mail	tmrequest@irvinesci.com

2. HAZARDS IDENTIFICATION

Classification

Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements

Warning

Hazard Statements

May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

Prevention
Do not breathe dust/fume/gas/mist/vapors/spray

Response
Get medical advice/attention if you feel unwell

Storage
Not applicable

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not classified

Other hazards
May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Disaccharide	Proprietary	10-30%
Dihyrdoxy alcohol	Proprietary	10-30%

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures for different exposure routes

General advice Immediate medical attention is not required.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion If swallowed, do not induce vomiting - seek medical advice.

Most important symptoms/effects, acute and delayed

Causes central nervous system depression.

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, CO_2, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media

None known.

Specific hazards arising from the chemical

None known.

Hazardous Combustion Products
Carbon oxides. Sodium oxides. Sulfur oxides. Hydrogen chloride.

Explosion Data

Sensitivity to Mechanical Impact none

Sensitivity to Static Discharge none

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid contact with the skin and the eyes.

Environmental precautions

Prevent product from entering drains.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep at temperatures between 2 and 8 °C (35 and 46 °F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs
Disaccharide	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust	
Dihyrdoxy alcohol	STEL: 50 ppm vapor fraction STEL: 10 mg/m³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³		

Exposure controls

Engineering Measures Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin and body protection Wear protective gloves/clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Take off contaminated clothing and wash before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear	**Odor**	Characteristic
Odor Threshold	Not available	**Physical State @20°C**	Liquid
pH	7.1 - 7.5		
Specific Gravity	Not available	**Molecular Weight**	Not available
Flash point	Not available	**Autoignition temperature**	Not available
Decomposition temperature	Not available	**Boiling point / boiling range**	Not available
Melting point / melting range	Not available	**Freezing Point**	Not available
Flammability Limit in Air	Not available		
Oxidizing Properties	Not available	**Explosive Properties**	Not available
Solubility	Not available	**Partition coefficient**	Not available
Evaporation rate	Not available	**Vapor Pressure**	Not available
Vapor density	Not available	**Density**	Not available
VOC (lb/gal)	Not available	**VOC (g/l)**	Not available
Dynamic viscosity	Not available		

10. STABILITY AND REACTIVITY

Reactivity

Stable under recommended storage conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Freezing. Protect from light.

Incompatible Materials

Strong oxidizing agents. Strong acids. Strong bases. Aldehydes. Aluminium.

Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Acute toxicity

Inhalation	Non-irritating during normal use.
Eyes	May cause slight irritation.
Skin	Non-irritating during normal use.
Ingestion	May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	LC50 (lethal concentration)
Disaccharide	= 29700 mg/kg (Rat)		
Dihyrdoxy alcohol	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)	

Information on toxicological effects

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Non-irritating during normal use.
Corrosivity	No information available.

Sensitization No information available.
Mutagenic Effects No information available.
Reproductive Toxicity No information available.
Carcinogenicity None known.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to kidneys through prolonged or repeated exposure if swallowed.

Target Organ Effects Central nervous system (CNS), Gastrointestinal tract (GI), Liver, Kidney.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

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ATEmix (oral) 3333 mg/kg

ATE: Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

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Chemical Name	Algae toxicity	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Dihyrdoxy alcohol		Pimephales promelas: 40000 - 60000 mg/L at 96 h		

Persistence and degradability

No information available.

Bioaccumulation

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Chemical Name	Octanol Water Partition Coefficient (log pow)
Dihyrdoxy alcohol	-1.93

Mobility

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Dispose of in accordance with local regulations.

Contaminated packaging

Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated.

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG Not regulated

ADR/RID Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	No
DSL/NDSL	No
PICCS	No
EINECS/ELINCS	No
ENCS	No
IECSC	No
KECL	No
AICS	No

***Yes - All component(s) of this product are included or are exempt from listing on the inventory.**

***No - Indicates the component(s) of this product are either not listed or have not been determined to be listed on the inventory.**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

TSCA Sections 4, 5 and 12(b)
This product does not contain any chemicals regulated by TSCA Sections 4, 5 or 12(b).

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS No	SARA 313 - Threshold Values %	Weight-%
Dihyrdoxy alcohol	Proprietary	1.0	10-30%

SARA 311/312 Hazard Categories
Classification is shown in section 2 of this SDS

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Dihyrdoxy alcohol	5000		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65

WARNING: Reproductive Harm - www.P65Warnings.ca.gov

Chemical Name	CAS No	California Prop. 65	Weight-%
Dihyrdoxy alcohol		Developmental	10-30

U.S. State Right-to-Know Regulations

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Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Disaccharide	X		X		
Dihyrdoxy alcohol	X	X	X	X	

International Regulations

Canada - NDSL

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Chemical Name	NDSL
Sodium salt compound	X
Amino acid	X

Mexico - Grade
No information available

Mexico - Carcinogen Status and Exposure Limits

Chemical Name	Carcinogen Status	Exposure Limits
Disaccharide		Mexico: TWA 10 mg/m³ Mexico: STEL 20 mg/m³
Dihyrdoxy alcohol		Mexico: Ceiling 100 mg/m³

Other Regulations
No information available

16. OTHER INFORMATION

NFPA	**Health Hazard** 1	**Flammability** 1	**Instability** 0	**Physical and chemical hazards** -
HMIS	**Health Hazard** 1*	**Flammability** 1	**Physical Hazard** 0	**Personal protection** B

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Disclaimer **The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

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