

**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  
**Recommended 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](mailto:tmrequest@irvinesci.com)

**2. HAZARDS IDENTIFICATION**

**Classification**

Specific target organ toxicity (repeated exposure)	Category 2
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**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/vapours/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%
Dihydroxy 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 doctor.
- 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<sub>2</sub>, 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. Sulphur 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 labelled 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 vapours 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/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust	
Dihydroxy alcohol	STEL: 50 ppm vapor fraction STEL: 10 mg/m <sup>3</sup> inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m <sup>3</sup>		

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 it before reuse. Regular cleaning of equipment, work area and clothing is recommended.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

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

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	LC50 (lethal concentration)
Disaccharide	= 29700 mg/kg ( Rat )		
Dihydroxy 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**

<b>Irritation</b>	Non-irritating during normal use.
<b>Corrosivity</b>	No information available.

**Sensitisation** 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

ATEmix (oral) 3333 mg/kg

ATE: Acute toxicity estimate

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

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

### Persistence and degradability

No information available.

### Bioaccumulation

Chemical Name	log Pow
Dihydroxy 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**

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated.
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>ADR/RID</u>	Not regulated
<u>ADN</u>	Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

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

**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 40n of the Code of Federal Regulations, Part

372:

Chemical Name	CAS No	SARA 313 - Threshold Values %	Weight-%
Dihydroxy 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
Dihydroxy alcohol	5000		RQ 5000 lb final RQ RQ 2270 kg final RQ

**State Regulations**

**California Proposition 65**



**WARNING:** Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

**U.S. State Right-to-Know Regulations**

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

**International Regulations**

**Canada - NDSL**

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/m <sup>3</sup> Mexico: STEL 20 mg/m <sup>3</sup>
Dihydroxy alcohol		Mexico: Ceiling 100 mg/m <sup>3</sup>

**Other Regulations**

No information available



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<b>16. OTHER INFORMATION</b>
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<b>NFPA</b>	<b>Health hazard</b> 1	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Physical and chemical hazards</b> -
<b>HMIS</b>	<b>Health hazard</b> 1*	<b>Flammability</b> 1	<b>Physical Hazard</b> 0	<b>Personal protection</b> B

**Prepared By** FUJIFILM Environment, Health and Safety, phone: 800-473-3854

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**Revision Note** No information available

**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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