1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Vitrification Thaw Kit (Vit Kit - Thaw), Thawing Solution-TS

Product code: 90137, 90134

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

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

GHS Label elements, including precautionary statements

Not classified
Precautionary Statements

Prevention
Not applicable

Response
Not applicable

Storage
Not applicable

Disposal
Not applicable

Hazards not otherwise classified (HNOC)
Not classified

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>Proprietary</td>
<td>15-40%</td>
</tr>
</tbody>
</table>

*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
None known.

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

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media
None known.

**Specific hazards arising from the chemical**

None known.

**Hazardous Combustion Products**

Carbon oxides.

**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.

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### 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.

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### 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/PERSOINAL PROTECTION

**Control parameters**

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 15 mg/m³ total dust</td>
<td>TWA: 10 mg/m³ total dust</td>
<td></td>
</tr>
</tbody>
</table>
### Exposure controls

**Engineering Measures**
Ventilation systems

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection**
If splashes are likely to occur, wear safety glasses with side-shields.

**Skin and body protection**
Wear protective gloves/clothing.

**Respiratory protection**
None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
<td>Physical State @20°C</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH</td>
<td>7.1 - 7.4</td>
<td>Molecular Weight</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
<td>Autoignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
<td>Boiling point / boiling range</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not available</td>
<td>Explosive Properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
<td>Partition coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC (lb/gal)</td>
<td>Not available</td>
<td>VOC (g/l)</td>
<td>Not available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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


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 Non-irritating during normal use.
Skin Non-irritating during normal use.
Ingestion Ingestion may cause stomach discomfort.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>LC50 (lethal concentration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>= 29700 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 No information available.
Target Organ Effects None known.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

ATEmix (oral) >5000 mg/kg

ATE: Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

**Persistence and degradability**
No information available.

**Bioaccumulation**
No information available.

**Mobility**
No information available.

**Other adverse effects**
No information available.

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### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods**
Dispose of in accordance with local regulations.

**Contaminated packaging**
Do not re-use empty containers.

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### 14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>DOT</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>MEX</td>
<td>Not regulated</td>
</tr>
<tr>
<td>ICAO</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>ADR/RID</td>
<td>Not regulated</td>
</tr>
<tr>
<td>ADN</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

---

### 15. REGULATORY INFORMATION

**International Inventories**

<table>
<thead>
<tr>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
</tbody>
</table>
*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 does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaccharide</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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</tbody>
</table>

International Regulations
Canada - NDSL

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium salt compound</td>
<td>X</td>
</tr>
<tr>
<td>Amino acid</td>
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</table>

Mexico - Grade
No information available

Mexico - Carcinogen Status and Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
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<tbody>
<tr>
<td>Disaccharide</td>
<td></td>
<td>Mexico: TWA 10 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 20 mg/m³</td>
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</table>

Other Regulations
No information available

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical hazards</th>
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<tr>
<td></td>
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<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal protection</th>
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<tr>
<td></td>
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</table>

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

Revision Date
22-May-2019

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.

end