1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Product name: F-DVS Viniflora® FrootZen™
Material No: 703559

1.2 Relevant identified uses of the substance or mixture and uses advised against
Application: For wine application.

1.3 Details of the supplier of the safety data sheet
Supplier: Chr. Hansen Inc.
9015 West Maple Street
53214-4298 Milwaukee - WI
Phone: +1 414 607-5700

Headquarters: Chr. Hansen A/S
Boge Allé 10-12
DK-2970 Horsholm
Tel. +45 45 74 74 74

1.4 Emergency telephone number
Emergency telephone: Health: 1-800-558-0802 (Monday through Friday, 7:30 AM to 5 PM CST) at other times, contact Chemtrec or the local poison control center. Transportation (Chemtrec): 1-800-424-9300 or +1-703-527-3887 (outside the U.S.)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
The product is not classified.

2.2 Label elements

Signal Word None.

Hazard statements None                  Precautionary statements None
2.3 Other hazards

Physical and Chemical Hazards:
The hazardous properties of the product are considered to be limited.

Human health:
Risk of local frostbite. Prolonged skin contact may cause redness and irritation.

The product does not contain any carcinogenic substances in amounts to be declared.

Environment:
The harmful effects of the product in the environment are considered to be limited.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
The product contains: yeast.

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Does not contain substances that must be indicated according to current regulations.

Listed substances: For information purposes only.

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation: Move into fresh air and keep at rest.

Skin contact: Remove contaminated clothes and rinse skin thoroughly with water.

Eye contact: Do not rub eye. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring these instructions.

Ingestion: Not likely, due to the form of the product.

4.2 Most important symptoms and effects, both acute and delayed
Risk of local frostbite. Prolonged skin contact may cause redness and irritation.

4.3 Indication of any immediate medical attention and special treatment needed
Symptomatic treatment.
5.1 Extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

5.2 Special hazards arising from the substance or mixture
No specific precautions.
The explosion limits and the flash point are stated in section 9.

5.3 Advice for firefighters
Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid contact with skin and eyes. Follow precautions for safe handling described in this safety data sheet.

6.2 Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up
Absorb spillage with suitable absorbent material. Flush contaminated area with plenty of water.

6.4 Reference to other sections
For personal protection, see section 8.
For waste disposal, see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Safe handling advice: Avoid contact with skin and eyes. Observe good industrial hygiene practices.

Technical measures: Keep the workplace clean.
Technical precautions: No special precautions.

7.2 Conditions for safe storage, including any incompatibilities
Store in tightly closed original container. Store at super frozen temperature conditions. For detailed information consult the PI sheet. Store in a dry place.

Technical measures for safe storage: No special precautions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Exposure limits are listed below. No data - no exposure limits noted for ingredient(s).

8.2 Exposure controls
Engineering measures: Provide adequate ventilation.

Respiratory equipment: Not relevant, due to the form of the product.
Risk of inhalation of dust or aerosols use suitable respirator. Use respiratory equipment with particle filter:
EU: FFP3 filter [e.g. 3M 8835 mask]
US: P100 filter [e.g. 3M 8293 mask]
For daily use of more than 3 hours a respirator with a powered air blower should be used.

Hand protection: Wear protective gloves against low temperatures.

Eye protection: Risk of contact: Wear goggles/face shield.

Skin protection: No special precautions.

Hygiene measures: Wash hands after contact.

Environmental Exposure Controls: None.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Frozen liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Light brown</td>
</tr>
<tr>
<td>Odor</td>
<td>Peptone-like</td>
</tr>
<tr>
<td>pH</td>
<td>6.00 - 7.00</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water soluble</td>
</tr>
</tbody>
</table>

9.2 Other information
No information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity
None known.

10.2 Chemical stability
Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions
None known.

10.4 Conditions to avoid
None known.
10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products
None known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Inhalation: Not relevant, due to the form of the product. Inhalation of high concentrations of dust or aerosols may cause toxic alveolitis. Symptoms like fever, coldshivering, coughing, difficulties in breathing, headache, muscle and joint pains etc. may appear 6 to 8 hours after exposure. The symptoms normally disappear completely over night without any treatment.

Skin contact: Risk of local frostbite. Prolonged contact may cause redness and irritation.

Eye contact: Risk of local frostbite.

Ingestion: Not likely, due to the form of the product.

Specific effects: None known, unless listed below.

The product does not contain any carcinogenic substances in amounts to be declared.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity
The harmful effects of the product in the environment are considered to be limited.

12.2 Persistence and degradability
The product is expected to be biodegradable.

12.3 Bioaccumulative potential
Bioaccumulation: Is not expected to be bio-accumulable.

12.4 Mobility in soil
The product is water soluble and may spread in water systems.

12.6 Other adverse effects
None known.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose of waste and residues in accordance with local authority requirements.
14. TRANSPORT INFORMATION

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

14.1 UN number

Air (ICAO/IATA):
14.3 Transport hazard class(es)
14.4 Packing group

Sea (IMDG):
14.3 Transport hazard class(es)
14.4 Packing group
EmS
MFAG

Land (DOT):
14.3 Transport hazard class(es)
14.4 Packing group

14.5 Environmental hazards
Marine pollutant (IMDG):

14.6 Special precautions for user
None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

NFPA:
Health: 1 Fire: 0 Reactivity: 0 Other: -

All chemicals are listed on TSCA.

Specific Provisions: State and local regulations may apply.
16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 3.

Wording of Hazard Statements

The information in this Safety Data Sheet has been obtained from current and reliable sources. However, the data is provided without warranty, express or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for use of this product and to assume liability for loss, injury, damage, or expense resulting from improper use of this product.