



## SECTION 2: Hazards identification

<b>Ingredients of unknown ecotoxicity</b>	: ID 2	Not applicable.
	4Hz 0.1% H2O/D2O	Not applicable.
	Temp Grad	Not applicable.
	Sucrose, NMR tested	Not applicable.

### Classification according to Directive 1999/45/EC [DPD]

ID 2	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
4Hz 0.1% H2O/D2O	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
Temp Grad	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
Sucrose, NMR tested	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

<b>Classification</b>	: ID 2	Not classified.
	4Hz 0.1% H2O/D2O	Not classified.
	Temp Grad	Not classified.
	Sucrose, NMR tested	Not classified.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### Hazard pictograms



<b>Signal word</b>	: ID 2	Warning
	4Hz 0.1% H2O/D2O	No signal word.
	Temp Grad	No signal word.
	Sucrose, NMR tested	No signal word.

<b>Hazard statements</b>	: ID 2	<b>GHS08</b> - May cause damage to organs through prolonged or repeated exposure.
	4Hz 0.1% H2O/D2O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.

### Precautionary statements

<b>Prevention</b>	:
<b>Response</b>	:
<b>Storage</b>	:
<b>Disposal</b>	:

<b>Hazardous ingredients</b>	: ID 2
	di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide

<b>Supplemental label elements</b>	: ID 2	Not applicable.
	4Hz 0.1% H2O/D2O	Not applicable.
	Temp Grad	Not applicable.
	Sucrose, NMR tested	Not applicable.

### Special packaging requirements

<b>Tactile warning of danger</b>	: ID 2	Not applicable.
	4Hz 0.1% H2O/D2O	Not applicable.
	Temp Grad	Not applicable.
	Sucrose, NMR tested	Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	: ID 2	None known.
	4Hz 0.1% H2O/D2O	None known.
	Temp Grad	None known.
	Sucrose, NMR tested	None known.

### SECTION 3: Composition/information on ingredients

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

**Substance/mixture** : ID 2 Mixture (encapsulated in article)  
 4Hz 0.1% H2O/D2O Mixture (encapsulated in article)  
 Temp Grad Mixture (encapsulated in article)  
 Sucrose, NMR tested Mixture (encapsulated in article)

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
ID 2 di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide Benzamide ( <sup>15</sup> N)	EC: 200-664-3 CAS: 2206-27-1 CAS: 31656-62-9	>=90	Not classified.	STOT RE 2, H373 (kidneys and liver) (oral)	[1]
		>=1 - <3	Xn; R22  <b>See Section 16 for the full text of the R-phrases declared above.</b>	Acute Tox. 4, H302  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**Eye contact** : ID 2 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

4Hz 0.1% H2O/D2O Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Temp Grad Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Sucrose, NMR tested Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : ID 2 Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4Hz 0.1% H2O/D2O Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**SECTION 4: First aid measures**

	Temp Grad	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Sucrose, NMR tested	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	: ID 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Temp Grad	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Sucrose, NMR tested	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: ID 2	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Loosen tight clothing such as a collar, tie, belt or waistband. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Temp Grad	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Sucrose, NMR tested	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	: ID 2	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No action shall be taken involving any personal risk or without suitable training.
	Temp Grad	No action shall be taken involving any personal risk or without suitable training.
	Sucrose, NMR tested	No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Potential acute health effects**

**SECTION 4: First aid measures**

<b>Eye contact</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

<b>Eye contact</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No specific data. No specific data. No specific data. No specific data.
<b>Inhalation</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No specific data. No specific data. No specific data. No specific data.
<b>Skin contact</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No specific data. No specific data. No specific data. No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	: ID 2  4Hz 0.1% H2O/D2O  Temp Grad  Sucrose, NMR tested	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No specific treatment. No specific treatment. No specific treatment. No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	None known. None known. None known. None known.

**5.2 Special hazards arising from the substance or mixture**

**SECTION 5: Firefighting measures**

<b>Hazards from the substance or mixture</b>	: ID 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	4Hz 0.1% H2O/D2O	In a fire or if heated, a pressure increase will occur and the container may burst.
	Temp Grad	In a fire or if heated, a pressure increase will occur and the container may burst.
	Sucrose, NMR tested	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: ID 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	4Hz 0.1% H2O/D2O	No specific data.
	Temp Grad	No specific data.
	Sucrose, NMR tested	No specific data.
<b>5.3 Advice for firefighters</b>		
<b>Special precautions for fire-fighters</b>	: ID 2	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	4Hz 0.1% H2O/D2O	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Temp Grad	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Sucrose, NMR tested	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
<b>Special protective equipment for fire-fighters</b>	: ID 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	4Hz 0.1% H2O/D2O	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Temp Grad	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Sucrose, NMR tested	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

**SECTION 6: Accidental release measures**

<b>For non-emergency personnel</b>	: ID 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	4Hz 0.1% H2O/D2O	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Temp Grad	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Sucrose, NMR tested	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: ID 2	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	4Hz 0.1% H2O/D2O	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Temp Grad	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Sucrose, NMR tested	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>6.2 Environmental precautions</b>	: ID 2	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	4Hz 0.1% H2O/D2O	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Temp Grad	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Sucrose, NMR tested	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and materials for containment and cleaning up**

**SECTION 6: Accidental release measures**

<b>Methods for cleaning up</b>	: ID 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Temp Grad	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Sucrose, NMR tested	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

<b>Protective measures</b>	: ID 2	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Put on appropriate personal protective equipment (see Section 8).
	Temp Grad	Put on appropriate personal protective equipment (see Section 8).
	Sucrose, NMR tested	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: ID 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Temp Grad	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Sucrose, NMR tested	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.



**SECTION 7: Handling and storage****7.2 Conditions for safe storage, including any incompatibilities**

: ID 2

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

4Hz 0.1% H<sub>2</sub>O/D<sub>2</sub>O

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Temp Grad

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Sucrose, NMR tested

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

**7.3 Specific end use(s)****Recommendations**

: ID 2

4Hz 0.1% H<sub>2</sub>O/D<sub>2</sub>O

Temp Grad

Sucrose, NMR tested

Industrial applications, Professional applications.

Industrial applications, Professional applications.

Industrial applications, Professional applications.

Industrial applications, Professional applications.

**Industrial sector specific solutions** : Not applicable.**SECTION 8: Exposure controls/personal protection**

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

**8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

**Recommended monitoring procedures**

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the

**SECTION 8: Exposure controls/personal protection**

measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Derived effect levels**

No DNELs available.

**Predicted effect concentrations**

No PNECs available.

**8.2 Exposure controls**

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

<b>Physical state</b>	: ID 2	Liquid. [Clear.]
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Liquid.
	Temp Grad	Liquid.
	Sucrose, NMR tested	Liquid. [Clear.]

**SECTION 9: Physical and chemical properties**

<b>Colour</b>	: ID 2	Colourless.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Colourless.
	Temp Grad	Colourless.
	Sucrose, NMR tested	Not available.
<b>Odour</b>	: ID 2	Ripe olive.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Odour threshold</b>	: ID 2	Not available.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>pH</b>	: ID 2	Not available.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	7
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Melting point/freezing point</b>	: ID 2	18 to 18.54°C
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	3.81°C
	Temp Grad	3.81°C
	Sucrose, NMR tested	0°C
<b>Initial boiling point and boiling range</b>	: ID 2	189°C
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	101.42°C
	Temp Grad	101.42°C
	Sucrose, NMR tested	100°C
<b>Flash point</b>	: ID 2	Closed cup: 88°C
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Evaporation rate</b>	: ID 2	Not available.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Flammability (solid, gas)</b>	: ID 2	Not available.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Upper/lower flammability or explosive limits</b>	: ID 2	Lower: 3%
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Vapour pressure</b>	: ID 2	0.061 kPa [room temperature]
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Vapour density</b>	: ID 2	1.04 [Air = 1]
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Relative density</b>	: ID 2	1.18
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	1.1
	Temp Grad	1.1
	Sucrose, NMR tested	Not available.
<b>Solubility(ies)</b>	: ID 2	Soluble in the following materials: cold water and hot water.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	Easily soluble in the following materials: cold water and hot water.
	Temp Grad	Easily soluble in the following materials: cold water and hot water.
	Sucrose, NMR tested	Easily soluble in the following materials: cold water and hot water.

**SECTION 9: Physical and chemical properties**

<b>Partition coefficient: n-octanol/water</b>	: ID 2	Not available.
	4Hz 0.1% H2O/D2O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Auto-ignition temperature</b>	: ID 2	215°C
	4Hz 0.1% H2O/D2O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Decomposition temperature</b>	: ID 2	Not available.
	4Hz 0.1% H2O/D2O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Viscosity</b>	: ID 2	Not available.
	4Hz 0.1% H2O/D2O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.
<b>Explosive properties</b>	: ID 2	Not available.
	4Hz 0.1% H2O/D2O	Not available.
	Temp Grad	Not available.
	Sucrose, NMR tested	Not available.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: ID 2	No specific test data related to reactivity available for this product or its ingredients.
	4Hz 0.1% H2O/D2O	No specific test data related to reactivity available for this product or its ingredients.
	Temp Grad	No specific test data related to reactivity available for this product or its ingredients.
	Sucrose, NMR tested	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: ID 2	The product is stable.
	4Hz 0.1% H2O/D2O	The product is stable.
	Temp Grad	The product is stable.
	Sucrose, NMR tested	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: ID 2	Under normal conditions of storage and use, hazardous reactions will not occur.
	4Hz 0.1% H2O/D2O	Under normal conditions of storage and use, hazardous reactions will not occur.
	Temp Grad	Under normal conditions of storage and use, hazardous reactions will not occur.
	Sucrose, NMR tested	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: ID 2	No specific data.
	4Hz 0.1% H2O/D2O	No specific data.
	Temp Grad	No specific data.
	Sucrose, NMR tested	No specific data.
<b>10.5 Incompatible materials</b>	: ID 2	No specific data.
	4Hz 0.1% H2O/D2O	No specific data.
	Temp Grad	No specific data.
	Sucrose, NMR tested	No specific data.

**SECTION 10: Stability and reactivity**

<b>10.6 Hazardous decomposition products</b>	: ID 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	4Hz 0.1% H2O/D2O	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Temp Grad	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Sucrose, NMR tested	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ID 2 di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-

Acute toxicity estimates

Route	ATE value
ID 2 Oral	25000 mg/kg
Temp Grad Dermal	426087 mg/kg

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ID 2 di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-

Sensitiser

**Conclusion/Summary** : Not available.

Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ID 2 di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	Category 2	Oral	kidneys and liver

Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

Potential acute health effects

<b>Inhalation</b>	: ID 2	No known significant effects or critical hazards.
	4Hz 0.1% H2O/D2O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.

**SECTION 11: Toxicological information**

<b>Ingestion</b>	: ID 2	No known significant effects or critical hazards.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.
<b>Skin contact</b>	: ID 2	No known significant effects or critical hazards.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.
<b>Eye contact</b>	: ID 2	No known significant effects or critical hazards.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation</b>	: ID 2	No specific data.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No specific data.
	Temp Grad	No specific data.
	Sucrose, NMR tested	No specific data.
<b>Ingestion</b>	: ID 2	No specific data.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No specific data.
	Temp Grad	No specific data.
	Sucrose, NMR tested	No specific data.
<b>Skin contact</b>	: ID 2	No specific data.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No specific data.
	Temp Grad	No specific data.
	Sucrose, NMR tested	No specific data.
<b>Eye contact</b>	: ID 2	No specific data.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No specific data.
	Temp Grad	No specific data.
	Sucrose, NMR tested	No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure****Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

<b>General</b>	: ID 2	May cause damage to organs through prolonged or repeated exposure.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: ID 2	No known significant effects or critical hazards.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: ID 2	No known significant effects or critical hazards.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: ID 2	No known significant effects or critical hazards.
	4Hz 0.1% H <sub>2</sub> O/D <sub>2</sub> O	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
	Sucrose, NMR tested	No known significant effects or critical hazards.

## SECTION 11: Toxicological information

<b>Developmental effects</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Toxicokinetics</b>		
<b>Absorption</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	Not available. Not available. Not available. Not available.
<b>Distribution</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	Not available. Not available. Not available. Not available.
<b>Metabolism</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	Not available. Not available. Not available. Not available.
<b>Elimination</b>	: ID 2 4Hz 0.1% H2O/D2O Temp Grad Sucrose, NMR tested	Not available. Not available. Not available. Not available.
<b>Other information</b>	: Not available.	

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
ID 2 di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Benzamide ( <sup>15</sup> N)	Acute LC50 661000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
ID 2 di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	-1.35	3.16	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. 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 local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

This Safety Data Sheet (EU\_English) is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

**Regulatory information**

**ADR/RID / IMDG / IATA** : Not regulated.

**Additional information** : **Remarks**  
De minimis quantities

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

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Other EU regulations**

**Europe inventory**

**Europe inventory** : Not determined.

**Black List Chemicals** : Not listed

**Priority List Chemicals** : Not listed

**Integrated pollution prevention and control list (IPPC) - Air** : Listed

**Integrated pollution prevention and control list (IPPC) - Water** : Not listed



## SECTION 15: Regulatory information

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
<b>ID 2</b> STOT RE 2, H373	Calculation method

**Full text of abbreviated H statements** : **ID 2**  
 H302 Harmful if swallowed.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H373 (kidneys and liver) (oral) May cause damage to organs through prolonged or repeated exposure if swallowed. (kidneys and liver)

**Full text of classifications [CLP/GHS]** : **ID 2**  
 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4  
 STOT RE 2, H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
 STOT RE 2, H373 (kidneys and liver) (oral) SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys and liver) (oral) - Category 2

**Full text of abbreviated R phrases** : **ID 2**  
 4Hz 0.1% H2O/D2O R22- Harmful if swallowed.  
 Temp Grad Not applicable.  
 Sucrose, NMR tested Not applicable.

**Full text of classifications [DSD/DPD]** : **ID 2**  
 4Hz 0.1% H2O/D2O Xn - Harmful  
 Temp Grad Not applicable.  
 Sucrose, NMR tested Not applicable.

**Date of issue/ Date of revision** : 25/02/2014

**Date of previous issue** : No previous validation.

**Version** : 1

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