



## Section 2. Hazards identification

<b>Hazard statements</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	May form combustible dust concentrations in air. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Precautionary statements</b>		
<b>Prevention</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	Not applicable. Not applicable. Not applicable.
<b>Response</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	Not applicable. Not applicable. Not applicable.
<b>Storage</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	Not applicable. Not applicable. Not applicable.
<b>Supplemental label elements</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation. None known. None known.
<b>2.3 Other hazards</b>		
<b>Hazards not otherwise classified</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	None known. None known. None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	Substance Substance Mixture
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Ingredient name	%	CAS number
<b>Glucose</b> Glucose	100	50-99-7
<b>2-deoxyglucose</b> 2-deoxy-D-glucose	100	154-17-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

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

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	:	Glucose	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.
		2-deoxyglucose	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.
		Oligomycin	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.
<b>Inhalation</b>	:	Glucose	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
		2-deoxyglucose	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Oligomycin	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>	:	Glucose	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		2-deoxyglucose	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Oligomycin	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	:	Glucose	Wash out mouth with water. 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.
		2-deoxyglucose	Wash out mouth with water. 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.
		Oligomycin	Wash out mouth with water. 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.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	:	Glucose	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
		2-deoxyglucose	No known significant effects or critical hazards.
		Oligomycin	No known significant effects or critical hazards.

## Section 4. First aid measures

<b>Inhalation</b>	: <input checked="" type="checkbox"/> Glucose	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	2-deoxyglucose	No known significant effects or critical hazards.
	Oligomycin	No known significant effects or critical hazards.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Glucose	No known significant effects or critical hazards.
	2-deoxyglucose	No known significant effects or critical hazards.
	Oligomycin	No known significant effects or critical hazards.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Glucose	No known significant effects or critical hazards.
	2-deoxyglucose	No known significant effects or critical hazards.
	Oligomycin	No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Glucose	Adverse symptoms may include the following: irritation redness
	2-deoxyglucose	No specific data.
	Oligomycin	No specific data.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Glucose	Adverse symptoms may include the following: respiratory tract irritation coughing
	2-deoxyglucose	No specific data.
	Oligomycin	No specific data.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Glucose	No specific data.
	2-deoxyglucose	No specific data.
	Oligomycin	No specific data.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Glucose	No specific data.
	2-deoxyglucose	No specific data.
	Oligomycin	No specific data.



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

<b>Notes to physician</b>	: <input checked="" type="checkbox"/> Glucose	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	2-deoxyglucose	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Oligomycin	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: <input checked="" type="checkbox"/> Glucose	No specific treatment.
	2-deoxyglucose	No specific treatment.
	Oligomycin	No specific treatment.
<b>Protection of first-aiders</b>	: <input checked="" type="checkbox"/> Glucose	No action shall be taken involving any personal risk or without suitable training.
	2-deoxyglucose	No action shall be taken involving any personal risk or without suitable training.
	Oligomycin	No action shall be taken involving any personal risk or without suitable training.



See toxicological information (Section 11)

## Section 5. Fire-fighting measures



### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	:  lucose	Use dry chemical powder.
	2-deoxyglucose	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Oligomycin	Use an extinguishing agent suitable for the surrounding fire.
	:  lucose	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	2-deoxyglucose	None known.
	Oligomycin	None known.

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

<b>Specific hazards arising from the chemical</b>	:  lucose	May form explosible dust-air mixture if dispersed.
	2-deoxyglucose	No specific fire or explosion hazard.
	Oligomycin	No specific fire or explosion hazard.
<b>Hazardous thermal decomposition products</b>	:  lucose	Decomposition products may include the following materials:
		carbon dioxide
	2-deoxyglucose	carbon monoxide
		Decomposition products may include the following materials:
	Oligomycin	carbon dioxide
		carbon monoxide
		Decomposition products may include the following materials:
		halogenated compounds
		metal oxide/oxides

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	:  lucose	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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	2-deoxyglucose	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.
	Oligomycin	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>	:  lucose	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	2-deoxyglucose	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Oligomycin	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

:  glucose

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment. 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 spilled material. Put on appropriate personal protective equipment. 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 spilled material. Put on appropriate personal protective equipment.

2-deoxyglucose

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 spilled material. Put on appropriate personal protective equipment.

Oligomycin

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 spilled material. Put on appropriate personal protective equipment.

#### For emergency responders

:  glucose

If specialized 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". If specialized 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". If specialized 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".

2-deoxyglucose

If specialized 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".

Oligomycin

If specialized 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".

### 6.2 Environmental precautions

:  glucose

Avoid dispersal of spilled 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).

2-deoxyglucose


Avoid dispersal of spilled 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).

Oligomycin

Avoid dispersal of spilled 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>	:  glucose	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	2-deoxyglucose	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Oligomycin	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	:  glucose	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
	2-deoxyglucose	Put on appropriate personal protective equipment (see Section 8).
	Oligomycin	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	:  glucose	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.
	2-deoxyglucose	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.
	Oligomycin	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

## Section 7. Handling and storage

before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

:  glucose

Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.


2-deoxyglucose

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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Storage temperature: room temperature. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Oligomycin


### 7.3 Specific end use(s)

#### Recommendations

:  glucose  
2-deoxyglucose  
Oligomycin

Industrial applications, Professional applications.  
Industrial applications, Professional applications.  
Industrial applications, Professional applications.

#### Industrial sector specific solutions

:  glucose  
2-deoxyglucose  
Oligomycin

Not available.  
Not available.  
Not available.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits



## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
<b>Glucose</b> Glucose	None.
<b>2-deoxyglucose</b> 2-deoxy-D-glucose	None.

### Biological exposure indices

No exposure indices known.

### 8.2 Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- 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.

### 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.
- 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.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : **Glucose** Solid.  
 2-deoxyglucose Solid.  
 Oligomycin Solid.
- Color** : **Glucose** Not available.  
 2-deoxyglucose Not available.  
 Oligomycin White.

## Section 9. Physical and chemical properties and safety characteristics

<b>Odor</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Odorless.
<b>Odor threshold</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.
<b>pH</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.
<b>Melting point/freezing point</b>	: <input checked="" type="checkbox"/> Glucose	146°C (294.8°F)
	: 2-deoxyglucose	146 to 147°C (294.8 to 296.6°F)
	: Oligomycin	Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.
<b>Flash point</b>	: <input checked="" type="checkbox"/> Glucose	Not applicable.
	: 2-deoxyglucose	Not applicable.
	: Oligomycin	Not applicable.
<b>Evaporation rate</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.
<b>Flammability</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.
<b>Lower and upper explosion limit/flammability limit</b>	: <input checked="" type="checkbox"/> Glucose	Not applicable.
	: 2-deoxyglucose	Not applicable.
	: Oligomycin	Not applicable.
<b>Vapor pressure</b>	: <input checked="" type="checkbox"/> Not available.	
<b>Relative vapor density</b>	: <input checked="" type="checkbox"/> Glucose	Not applicable.
	: 2-deoxyglucose	Not applicable.
	: Oligomycin	Not applicable.
<b>Relative density</b>	: <input checked="" type="checkbox"/> Glucose	1.56
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.
<b>Solubility(ies)</b>	: <b>Media</b>	<b>Result</b>
	: <input checked="" type="checkbox"/> Glucose water	Soluble
	: <b>2-deoxyglucose</b> water	Soluble
<b>Partition coefficient: n-octanol/water</b>	: <input checked="" type="checkbox"/> Glucose	-3.24
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not applicable.
<b>Auto-ignition temperature</b>	: <input checked="" type="checkbox"/> Glucose	500°C (932°F)
	: 2-deoxyglucose	Not applicable.
	: Oligomycin	Not applicable.
<b>Decomposition temperature</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.
<b>Viscosity</b>	: <input checked="" type="checkbox"/> Glucose	Not applicable.
	: 2-deoxyglucose	Not applicable.
	: Oligomycin	Not applicable.
<b>Particle characteristics</b>		
<b>Median particle size</b>	: <input checked="" type="checkbox"/> Glucose	Not available.
	: 2-deoxyglucose	Not available.
	: Oligomycin	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	The product is stable. The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Reactive or incompatible with the following materials: oxidizing materials May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. 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
<input checked="" type="checkbox"/> Glucose Glucose	LD50 Oral	Rat	25800 mg/kg	-

#### Irritation/Corrosion

Not available.

## Section 11. Toxicological information

### Sensitization

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

<b>Information on the likely routes of exposure</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	Not available. Not available. Not available.
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### Potential acute health effects

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Glucose 2-deoxyglucose Oligomycin	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

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

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Adverse symptoms may include the following: irritation redness No specific data. No specific data.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Glucose  2-deoxyglucose Oligomycin	Adverse symptoms may include the following: respiratory tract irritation coughing No specific data. No specific data.

## Section 11. Toxicological information

<b>Skin contact</b>	: <input checked="" type="checkbox"/> Glucose	No specific data.
	2-deoxyglucose	No specific data.
	Oligomycin	No specific data.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Glucose	No specific data.
	2-deoxyglucose	No specific data.
	Oligomycin	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>	: <input checked="" type="checkbox"/> Glucose	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	2-deoxyglucose	No known significant effects or critical hazards.
	Oligomycin	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: <input checked="" type="checkbox"/> Glucose	No known significant effects or critical hazards.
	2-deoxyglucose	No known significant effects or critical hazards.
	Oligomycin	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: <input checked="" type="checkbox"/> Glucose	No known significant effects or critical hazards.
	2-deoxyglucose	No known significant effects or critical hazards.
	Oligomycin	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: <input checked="" type="checkbox"/> Glucose	No known significant effects or critical hazards.
	2-deoxyglucose	No known significant effects or critical hazards.
	Oligomycin	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
<input checked="" type="checkbox"/> <b>Glucose</b> Glucose	25800	N/A	N/A	N/A	N/A
<b>Oligomycin</b> Oligomycin	110784.0	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### 12.1 Toxicity

Not available.

### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Glucose Glucose	-3.24	-	Low

### 12.4 Mobility in soil

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

12.5 Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods** : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.**

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

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

**U.S. Federal regulations** : TSCA 8(a) CDR Exempt/Partial exemption: Not determined  
Clean Water Act (CWA) 311: Nitric acid, iron(3+) salt, nonahydrate

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed


#### SARA 302/304

##### Composition/information on ingredients

No products were found.


**SARA 304 RQ** : Not applicable.

#### SARA 311/312

**Classification** :  Glucose  
2-deoxyglucose  
Oligomycin

COMBUSTIBLE DUSTS  
Not applicable.  
Not applicable.

##### Composition/information on ingredients

Name	%	Classification
 Glucose Glucose	100	COMBUSTIBLE DUSTS

### State regulations

**Massachusetts** : None of the components are listed.

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

#### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.


## Section 15. Regulatory information

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
 <b>Glucose</b> COMBUSTIBLE DUSTS	On basis of test data

### History

<b>Date of issue/Date of revision</b>	: 04/30/2024
<b>Date of previous issue</b>	: 04/28/2020
<b>Version</b>	: 4

### Key to abbreviations

<b>ATE</b>	= Acute Toxicity Estimate
<b>BCF</b>	= Bioconcentration Factor
<b>GHS</b>	= Globally Harmonized System of Classification and Labelling of Chemicals
<b>IATA</b>	= International Air Transport Association
<b>IBC</b>	= Intermediate Bulk Container
<b>IMDG</b>	= International Maritime Dangerous Goods
<b>LogPow</b>	= logarithm of the octanol/water partition coefficient
<b>MARPOL</b>	= International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
<b>N/A</b>	= Not available
<b>UN</b>	= United Nations

 Indicates information that has changed from previously issued version.

### Notice to reader

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