

## Fructose

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Fructose
<b>Other Means of Identification</b>	D-Fructose, Laevulose
<b>Product Code(s)</b>	FR1010
<b>Product Family</b>	Organic solid
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	0483

### SECTION 2. HAZARD IDENTIFICATION

**Classification**

Not classified under any hazard class.

**Label Elements**

Not applicable

**Other Hazards**

May form combustible dust concentrations in air.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Fructose	30237-26-4	> 99	D-Fructose, Laevulose

### SECTION 4. FIRST-AID MEASURES

**First-aid Measures****Inhalation**

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing.

**Skin Contact**

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes.

**Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

**Ingestion**

Rinse mouth with water. Do not induce vomiting. Get medical advice or attention if you feel unwell.

**First-aid Comments**

All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use

in the workplace.

### **Most Important Symptoms and Effects, Acute and Delayed**

None known.

### **Immediate Medical Attention and Special Treatment**

#### **Special Instructions**

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## **SECTION 5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

#### **Suitable Extinguishing Media**

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

#### **Unsuitable Extinguishing Media**

None known.

### **Specific Hazards Arising from the Product**

Combustible dust. Powder may form explosive dust-air mixture. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

### **Special Protective Equipment and Precautions for Fire-fighters**

Fight fire from a safe distance or a protected location. Dust explosion hazard. Use water spray or fog to prevent dust formation and minimize risk of explosion. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

A full-body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment, and Emergency Procedures**

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials.

### **Environmental Precautions**

Do not allow into any sewer, on the ground or into any waterway.

### **Methods and Materials for Containment and Cleaning Up**

Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Avoid generating dusts. Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Prevent accidental contact with incompatible chemicals. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Keep containers tightly closed when not in use or empty.

### **Conditions for Safe Storage**

Store in an area that is: cool, dry, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in a closed container.

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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## Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Fructose	10 mg/m3		15 mg/m3			

### Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

### Individual Protection Measures

#### Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

#### Skin Protection

Not required, if used as directed. In case of an emergency (e.g. an uncontrolled release): wear chemical protective clothing e.g. gloves, aprons, boots.

No specific guidelines are available. Contact chemical manufacturer/supplier for advice.

#### Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	White powder.
Odour	Odourless
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	103 °C (217 °F) (melting); 103 °C (217 °F) (freezing)
Initial Boiling Point/Range	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	Not available
Solubility	Soluble in water; Soluble in all proportions in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

None known.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

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None known.

**Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Generation of dust. Temperatures above 100.0 °C (212.0 °F)

**Incompatible Materials**

Strong oxidizing agents (e.g. perchloric acid).

**Hazardous Decomposition Products**

Very toxic carbon monoxide, carbon dioxide.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Fructose	Not available	Not available	Not available

**Skin Corrosion/Irritation**

Human experience and animal tests show no or very mild irritation.

**Serious Eye Damage/Irritation**

Human experience and animal tests show no or very mild irritation.

**STOT (Specific Target Organ Toxicity) - Single Exposure**

**Inhalation**

May cause nose and throat irritation.

**Ingestion**

No information was located.

**Aspiration Hazard**

No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

**Carcinogenicity**

No information was located.

**Reproductive Toxicity**

**Development of Offspring**

No information was located.

**Sexual Function and Fertility**

No information was located.

**Effects on or via Lactation**

No information was located.

**Germ Cell Mutagenicity**

No information was located.

**Interactive Effects**

No information was located.

**SECTION 12. ECOLOGICAL INFORMATION**

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

**Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

Listed on the DSL.

#### USA

**Toxic Substances Control Act (TSCA) Section 8(b)**

Listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**NFPA Rating** Health - 0 Flammability - 1 Instability - 0

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

**Date of Preparation** April 26, 2016

**Date of Last Revision** April 26, 2016

**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). Archer Daniels Midland Company database.

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