



Specification

Product Name: Fructose
Product Code: SPEC0026

Description:

Fructose is a simple sugar that occurs naturally in foods such as fruits and vegetables giving fruits their sweet taste. The fine crystalline fructose is 1.2 times sweeter than sugar, allowing for a reduction in the amount of sugar needed to sweeten foods. It offers unique benefits including improved product texture, taste and stability, the mouthfeel of beverages and foods and contributes to increased height in baked goods. Fructose is widely used in low-calorie products, flavoured water and milk, yoghurt, baked goods, confectionery, fruit juice and many more. It has a low Glycaemic Index and is widely used as a food ingredient in the food industry. The Glycaemic load per gm for Fructose is 19, table sugar is 65 per gm.

- A non-GMO, food grade crystalline fructose, which is processed from high fructose corn syrup.
- An ideal choice of sweetener which enhances natural and healthy sweetness in foods and beverages.
- Fructose is nutritive sweeteners, into a pure white free-flowing crystalline material.
- Fructose does not contain any artificial sweeteners.
- Fructose conforms to the EP, USP, FCC and Codex Alimentarius requirements for Crystalline Fructose.

General Characteristics	
Formula	C ₆ H ₁₂ O ₆
Molecular Weight	180
Appearance	White Crystals
Taste	Sweet
Odour	Odourless
Solubility (g / 100ml at 25°C)	Very soluble in water, soluble in ethanol. Sparingly soluble in ether.

Analysis		
Identification	Value	Method
Fructose (%)	>99.5	HPLC, on d.s.
pH	5.0-7.0	pH-meter, 10% solution
Moisture (%)	<0.2	Karl Fischer
Specific Rotation	(-91.0) – (-93.5)	Polarimeter
Sulphated Ash (%)	<0.1	FCC
HMF (ppm)	<40	Spectrophotometer
Colour of solution (Icumsa)	<20	ICUMSA
Acidity (mL)	<0.5	Titration with 0.02N NaOH

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SO ₂ (ppm)	<10	Spectrophotometer
Bulk Density (g/lit)	800 – 1000	Free flowing volume
Calcium (ppm)	<5	External Lab
Sulphate (ppm)	<50	External Lab
Chloride (ppm)	<40	External Lab

Granulation	
Microns	Limits
On 200	Min 80%
On 600	Max 25%

Microbiology			
Analysis	Unit	Value	Method
Total count	n/g	<100	Filtration Method
Yeasts	n/g	<10	Filtration Method
Moulds	n/g	<10	Filtration Method
Coliforms	n/g	Negative	External Lab
E.Coli	n/g	Negative	External Lab
Staphylococcus aureus	n/g	Negative	External Lab
Salmonella	n/50g	Negative	External Lab
Sulfite reducing clostridium	n/g	<10	External Lab
Enterobacteraceae	n/g	<10	External Lab
Aerobic mesophilic sporeforming bacteria	n/g	<10	External Lab
Aerobic thermophilic sporeforming bacteria	n/g	<10	External Lab
Anaerobic mesophilic spores count	n/g	<10	External Lab
Bacillus cereus	n/g	<10	External Lab
Listeria monocytogenes	n/25g	Negative	External Lab

Heavy Metals			
Analysis	Unit	Value	Method
Iron (ppm)	ppm	<1.0	External Lab
Copper	ppm	<1.0	External Lab
Arsenic (ppm)	ppm	<0.1	External Lab
Lead (ppm)	ppm	<0.1	External Lab
Cadmium (ppm)	ppm	<0.1	External Lab
Mercury (ppm)	ppm	<0.03	External Lab

Pesticides			
Analysis	Unit	Value	Method
Pesticide Residues	ppb	≤10	External Lab

Mycotoxins			
Analysis	Unit	Value	Method
Toplam Aflatoxin	ppb	<4	External Lab
Aflatoxin G1	ppb	<2	External Lab
Aflatoxin B1	ppb	<1	External Lab
Aflatoxin G2	ppb	<2	External Lab
Aflatoxin B2	ppb	<1	External Lab
Ochratoxin	ppb	<3	External Lab

Ingredients: Fructose

Dietary Information:

Suitable for Vegans & Vegetarians, Non-GMO, Gluten Free, Non-Irradiated.

Nutritional Information:

Based on typical content/100g: Energy: 1663kj/398kcal, Fats: 0g, Carbohydrates: 100g, Of which sugars: 100g, Protein: 0g, Salt: 0g.

Storage: Store in dry, cool conditions and not in direct sunlight.

Packaging:

Size	EAN
250g	5060341117145
500g	5060341117152
1kg	5060341117169
5kg	5056191008412
10kg	5056191008429

Shelf Life: 36 months from production date.

Allergen Declaration

Allergen	Contains (Y/N)
Cereals containing Gluten	N
Crustaceans	N
Eggs	N
Fish	N
Peanuts	N
Soybeans	N
Milk	N
Nuts	N
Celery	N
Mustard	N
Sesame Seeds	N
Sulphur Dioxide and Sulphites (at concentration of more than 10mg/kg or 10mg/L in terms of Sulphur Dioxide)	N
Lupin	N
Molluscs	N



Material Safety Data Sheet

1: Substance/Preparation and Company Identification:

Product name: Crystalline Fructose

Chemical name Fructose

Trade Name: Fructose

Chemical formula: C₆H₁₂O₆

Product Use: Natural sweetener

Supplier: Special Ingredients Ltd, 4 Foxwood View, Chesterfield, S41 9RN. Tel: 0044 (0)1246 906247. E-mail address: <https://specialingredients.co.uk/pages/contact>, Emergency Telephone Contact: 07387 330318.

2: Hazard Identification:

2.1 Classification of the product:

Classification according to EC 1272/2008;

Product Name	GHS Classification
Fructose	-

Classification according to EU Directives 67/548/EEC or 1999/45/EC;

Product Name	EU Classification
Fructose	-

2.2 Labelling:

Labelling according to EC 1272/2008;

Hazard pictograms	N/A
Signal word	Not required
Hazard statements	N/A
Precautionary statements	N/A

2.3 Other Hazard:

None

3: Composition / Information on Ingredients

Ingredients Name	Identifiers	%	EU Classification	GHS Classification
Fructose	Cas Number: 57-48-7 EC Number: 200-333-3	100	-	-

4: First Aid Measures:

Eye Contact: Flush eyes with water for 15 minutes. If irritation exists, seek medical attention.

Skin Contact: Wash with water. If irritation exists, seek medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, Seek medical attention.

Ingestion: No hazard.

5: Firefighting Measures:

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Extinguishing Agents suitable: Water spray, Foam, Carbon dioxide, dry chemical powder.

Special Fire Fighting Procedures: Protective equipment - Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire Explosion Hazards: Dust dispersed in air becomes explosive when exposed to ignition source.

6: Accidental Release Measures:

Personal Protection Measures: Use appropriate equipment to minimize direct contact with skin or eyes and prevent inhalation of dust.

Environmental Protection Measures: Use a shovel to put the material into a convenient waste disposal container.

Methods for Cleaning Up: Sweep or shovel spills into appropriate container for disposal. Sweep up with explosion proof vacuum cleaner. Can be hosed down in normal sewage with plenty of hot water. Avoid making dust.

7: Handling And Storage:

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing dust.

Storage: Sealed bags should be stored in-doors under cool, dry conditions. There should be no smoking, welding or open flame in the storage area.

8: Exposure Controls/ Personal Protection:

Eye Protection Safety: Glasses may be desirable when dumping bags.

Skin Protection: Not required.

Respiratory Protection: Use appropriate mask when necessary

Hand and Body Protection: Not required.

Work/Hygiene Practice: Practice good housekeeping.

9: Physical and Chemical Properties:

General Information

Physical State and Appearance: Crystalline solid.

Molecular Weight: 180,16 g/mol

Colour: White

Odour: Odourless

Bulk Density at 25°C: 800 - 1000 [g/l]

PH Value in Distilled Water: 5 - 7 (10% suspension in water)

Boiling Point: N/A

Melting Point: 103°C (217.4°F)

Flash Point: N/A

Explosion Limits: N/A

Flammability: N/A

Solubility in Water: ~ 80% weight (20°C)

10: Stability and Reactivity:

Stability: Product is stable.

Substances to be Avoided: Avoid strong acids and oxidizers.

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Corrosivity: Not considered to be corrosive for metals and glass.
Hazardous Decomposition or Byproducts: Burning can produce CO and CO₂
Physical State at 25°C: Crystalline
Polymerization: Will not occur.

11: Toxicological Information:

Potential Acute Health Effects

Inhalation: Avoid breathing dust. May be harmful if inhaled.

Ingestion: None

Skin and Body Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Acute Toxicity: None

Potential Chronic Health Effects

Carcinogenicity: None

Mutagenicity: None

12: Ecological Information:

Toxicity: Not toxic

Persistence and Degradability: N/A

Bioaccumulative potential: N/A

Mobility in soil: N/A

Results of PBT and vPvB assessment: N/A

Other adverse affects: N/A

13: Instruction of Disposal

Product – APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION: Consultation with a permitted waste disposal site should be accomplished. Always contact a permitted waste disposal to assure compliance with all current local, State and Federal Regulations.

Packaging: Packaging must be disposed of in compliance with country specific regulations.

14: Transport Information:

Transport Information: Not classified as dangerous in the meaning of transport regulation.

15: Regulatory Information:

EU regulations hazard Symbol: None

Risk Phrases: None

Safety Phrases: None

16: Other Information:

Recommended Uses: Food Application

The information contained in this data sheet is, to the best of our knowledge, true and accurate, but any recommendations or suggestions which may be made are without guarantee, since the conditions of use are beyond our control. We do not accept any liability whatsoever, however arising, which results directly or indirectly from the use of the product.

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