


MATERIAL SAFETY DATA SHEET

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MSDS No. WLC3814R
Effective Date August 4, 1998

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	D-FRUCTOSE	 <p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS*</p> <table border="1"> <tr> <td>Health</td> <td>0</td> </tr> <tr> <td>Fire</td> <td>1</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> </table>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4	Health	0	Fire	1	Reactivity	0
LEAST	SLIGHT		MODERATE	HIGH	EXTREME													
0	1		2	3	4													
Health	0																	
Fire	1																	
Reactivity	0																	
Chemical Synonyms	d-Levulose																	
Formula	C ₆ H ₁₂ O ₆																	
Unit Size	up to 2.5 Kg.																	
C.A.S. No.	57-48-7																	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
D-Fructose	100%	None established.

LOW HAZARD FOR USUAL LABORATORY HANDLING; NON-TOXIC.

SECTION III PHYSICAL DATA

Melting Point (°F)	104°C (219°F) dec.	Specific Gravity (H ₂ O = 1)	1.60 (20/4°C)
Boiling Point (°F)	Decomposes.	Percent Volatile by Volume (%)	Non-volatile (NA).
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate (=1)	Non-volatile (NA).
Vapor Density (Air=1)	6.2		
Solubility in Water	Freely soluble.		
Appearance & Odor	White crystalline powder; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA).	Flammable Limits in Air % by Volume	NA	Lower	Upper
Extinguisher Media	Water spray; dry chemical (ABC); carbon dioxide (CO ₂).				

SPECIAL FIREFIGHTING PROCEDURES

Evacuate personnel to an area of upwind direction and remove unneeded materials; keep fire exposed containers cool with water spray, and provide fire fighters with self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials. This material in powder form, is capable of creating a dust explosion.

D.O.T. NON-REGULATED.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA FF 290

Threshold Limited Value None established. TWA: 10 mg/m³ total dust, or 5 mg/m³ respirable dust. (ACGIH 1992-93).

Effects of Overexposure Specific data is not available. This compound is considered to be of low hazard by ingestion or by contact. Exercise appropriate procedure to minimize potential hazards. **EYES:** No specific hazard is known. However, any material that contacts the eye may be irritating.

Emergency and First Aid Procedures

EYES: Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. If irritation develops or persists, get medical attention. **SKIN:** Flush with water. **INHALATION:** Remove to fresh air. If symptoms of illness develop, get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid	Excessive temperature, heat or humidity.
	Stable		

Incompatibility (Materials to Avoid) Strong oxidizers.

Hazardous Decomposition Products Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

Hazardous Polymerization	Conditions to Avoid		Not applicable.
	May Occur	Will Not Occur	
		X	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled **Small spills:** Recover for use if not contaminated. Sweep up and place in a suitable container. Dissolve in water and flush to sewer with copious amounts of water.

Waste Disposal Method Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Uncontaminated material may be disposed of in a sanitary landfill or disposed of in an approved incinerator.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection None should be needed in normal laboratory handling. If dusty conditions prevail, work in a ventilation hood or wear a NIOSH/MSHA-approved dust mask or respirator.

Ventilation	Local Exhaust	Not needed.	Special	No.
	Mechanical (General)	If dust prevails.	Other	No.

Protective Gloves Rubber. **Eye Protection** Chemical safety glasses.

Other Protective Equipment Lab coat, eye wash station, ventilation hood, safety glasses, proper gloves.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a cool, dry place away from strong oxidants. Wash thoroughly after handling. Keep container tightly closed when not in use.

Other Precautions Read label on container before using. Do not wear contact lenses when working with chemicals.

Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 6	Date 8/4/98	Approved Michael Raszeja	Chemical Safety Coordinator	MR
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