

Material Safety Data Sheet

May be used to comply with

OSHA's Hazard Communication Standard, 29 CFR 1910.1200. This Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health

Administration

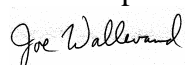
(Non-Mandatory Form)

Form Approved

OMB No. 1218-0072

IDENTITY (As Used on Label and List) GRANULATED SUGAR	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
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Section I

Manufacturer's Name United Sugars Corporation	Emergency Telephone Number (612) 860-9433
Address (Number, Street, City, State, and ZIP Code) 7803 Glenroy Road Bloomington, MN 55439	Telephone Number for Information (952) 896-0426
Signature of Preparer (optional) 	Date Prepared 3/10/2005

Section II - Hazard Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s)):	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
No Hazardous Components	N/A	N/A	N/A	N/A
Sugar (Sucrose), CAS 57-50-1				100%

Section III - Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H ₂ O = 1)	1.587
Vapor Pressure (mm Hg.)	N/A	Melting Point	160 - 186C (320 - 367F)
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water: 2.07 grams per gram water @25°; 331 grams per 100 grams water @ 70°C			
Appearance and Odor: White, crystalline solid (monoclinic sphenoidal); odorless to a characteristic caramel odor.			

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): N/A	Flammable Limits N/A	LEL dust 20 g/m ³	UEL dust 15 k g/m ³
Extinguishing media: Water or other approved media.			
Note: sugar dust is explosive, similar to flour and grain products			
Ignition temperature of dust cloud	350°C		
Minimum igniting energy	< 10mJ		
Minimum explosion concentration	0.035 oz / cu ft		
Maximum explosion pressure	9 bar		
Maximum rate of pressure rise	5,000 psi / sec		
Minimum explosible concentration in air:	0.045 g/l.		
Special Fire Fighting Procedures: Avoid creating airborne dust with high pressure water streams; use fine spray to saturate spill.			
Unusual Fire and Explosion Hazards: Supports combustion only poorly; however, the relative explosion hazard of the dust is severe. As with any finely divided organic solid, dust may be explosive if mixed with air in critical proportions and in the presence of an ignition source.			

Section V - Reactivity Data

Stability:	Unstable N/A	Conditions to Avoid:
Stable under ordinary conditions of use and storage	Stable √	Excessive temperatures above 160F; heat, flames, ignition sources, and incompatibles.
Incompatibility (<i>Materials to Avoid</i>): Strong oxidizers such as nitric acid or sulphuric acid		
Hazardous Decomposition or Byproducts: Thermal decomposition or burning will produce carbon dioxide, carbon monoxide.		
Hazardous Polymerization	May Occur N/A	Conditions to Avoid:
N/A	Will Not Occur √	N/A

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? None except that exposure to dust may aggravate respiratory conditions.	Skin? N/A	Ingestion? Non-toxic.
Health Hazards (<i>Acute and Chronic</i>): Eye irritation: dust may cause mechanical irritation.			
Carcinogenicity: Product contains no ingredients currently classified as carcinogenic by NTP, IARC, or OSHA.	NTP? N/A	IARC Monographs? N/A	OSHA Regulated? N/A
Signs and Symptoms of Exposure: Mechanical irritation of eyes. Inhalation of high concentrations of the dust may cause coughing and upper respiratory tract irritation.			
Medical Conditions Generally Aggravated by Exposure: Pre-existing respiratory conditions: use approved mask.			
Emergency and First Aid Procedures: INHALED: not expected to require first aid. Remove to fresh air. Get medical attention for any breathing difficulty. EYES: flush with running water, holding eyelids open. Get medical help if symptoms persist.			

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Remove ignition sources. Avoid dispersing dust into the air. Use non-sparking tools. Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Sweep or scoop up spill for recovery or disposal and place into a closed container.
Waste Disposal Method: Non-toxic and biodegradable. Whatever cannot be saved for recovery may be discarded as permitted by applicable regulations.
Precautions to Be taken in Handling and Storing: Remove ignition sources. Avoid dispersing dust into the air.
Other Precautions: N/A

Section VIII - Control Measures

Respiratory Protection (<i>Specify Type</i>): None normally required. In dusty situation, a NIOSH-approved respirator for dust may be worn.		
Ventilation:	Local Exhaust N/A	Special N/A
	Mechanical (<i>General</i>) Dilution ventilation is a satisfactory control for sucrose.	Other N/A

Protective Gloves: N/A	Eye Protection: Goggles in a dusty situation.
Other Protective Clothing or Equipment: N/A	
Work/Hygienic Practices: Wearing of contact lenses when handling product should be avoided.	

Section IX - Special Precautions

Precautions to be taken in Handling and Storing: Remove ignition sources. Avoid dispersing dust into the air.
Other Precautions: N/A

Each MSDS must be reviewed for correctness and completeness every three years.

Reviewed by: Raymond Smith

Revision date

3/20/2009