

Material Safety Data Sheet

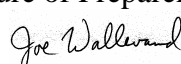
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. This Standard must be consulted for specific requirements.

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) POWDERED 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
Sucrose CAS 57-50-1				97
Corn starch CAS 9005-25-8				3

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: Sucrose: 2.07 grams per gram water @25°, 331 grams per 100 grams water @ 70°C; Starch gelatinizes in hot water.			
Appearance and Odor: Very finely-powdered, white, crystalline solid; odorless.			

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			
Special Fire Fighting Procedures: Avoid creating airborne dust with high pressure water streams; use fine spray to saturate spill.			
Note: sugar dust and starch dust are 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.	
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 sulfuric 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. Beware of possible slip hazard with wet material (gelatinized starch).
Waste Disposal Method: Whatever cannot be saved for recovery may be burned in an approved incinerator or disposed in an approved waste facility. Ensure compliance with local, state, and federal 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>): NIOSH-approved respirator for dust must be worn.		
Ventilation:	Local Exhaust N/A	Special N/A
	Mechanical (<i>General</i>) Do not create dust.	Other N/A

Protective Gloves: N/A	Eye Protection: Goggles or dust proof glasses.
Other Protective Clothing or Equipment: Non-slip footwear.	
Work/Hygienic Practices: Wearing of contact lenses when handling product should be avoided. Beware of possible slip hazard with wet material (gelatinized starch).	

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