

SAFETY DATA SHEET – LIGHT (or DARK) BROWN GRANULATED

Prepared to U.S. OSHA Standards in compliance with the GHS system (29 CFR 1910.1200(g), rev. 2012).

<p>Section 1</p>	<p>Identification</p>	<p>Light (or Dark) Brown Granulated Sugar</p> <p>Manufacturer's Name: United Sugar Producers and Refiners 8000 West 78th St., Suite 300 Edina, MN 55439</p> <p>Emergency Telephone Number: 701-261-0660</p> <p>Information Telephone Number: 800-984-3585</p>	<p>Food additive, beverage sweetener, flavor enhancer, baking ingredient, intended for human consumption</p> <p>No restrictions on use</p>
<p>Section 2</p>	<p>Hazard(s) Identification</p>	<p>No Hazardous Components</p> <p>Sugar itself supports combustion only poorly and is not by itself a hazard unless it is involved as a secondary fuel in an existing fire.</p>	<p>The dust generated by the transportation and handling of sugar is an explosion hazard; measures must be taken to avoid the creation of fugitive dust and to abate any dust created.</p>
<p>Section 3</p>	<p>Composition/Information on Ingredients</p>	<p>Sucrose, sugar, Saccharose; C₁₂ H₂₂ O₁₁: 92%</p> <p>IUPAC: (2R,3R,4S,5S,6R)-2-[(2S,3S,4S,5R)-3,4-dihydroxy-2,5-bis(hydroxymethyl) oxolan-2-yl] oxy-6-(hydroxymethyl) oxane-3,4,5-triol]</p>	<p>Table sugar, beet sugar, natural sweetener</p> <p>CAS 57-50-1 EINECS 200-334-9 Pure product (organic compound)</p> <p>Highly variable, innocuous composition of saccharides, amino and carboxylic acids, minerals, and salts from the processing of sugar cane.</p>
<p>Section 4</p>	<p>First Aid Measures</p>	<p>INHALED: not expected to require first aid.</p>	<p>EYES: Possible mechanical irritant. Flush granular material with running water, holding eyelids open. Get medical help if symptoms persist.</p>

<p>Section 5</p>	<p>Fire-fighting Measures</p>	<p>Use water or other approved media. Thermal decomposition or burning will produce carbon dioxide, carbon monoxide.</p> <p>Normal fire dept SOP for precautions and PPE.</p>	<p>Though brown sugars are moist due to molasses content, it is conceivable that large amounts of brown sugar could dry out due to improper storage and handling; the dust of the dried sugar is explosive, similar to flour and grain products.</p>
<p>Section 6</p>	<p>Accidental Release Measures</p>	<p>Sweep or scoop up spill for recovery or disposal and place into a closed container. Non-toxic and biodegradable. Whatever cannot be saved for recovery may be discarded as permitted by applicable regulations.</p>	<p>Clean-up personnel should wear non-slip footwear.</p>
<p>Section 7</p>	<p>Handling and Storage</p>	<p>No special handling is required.</p> <p>In cases of plugged material-handling piping or enclosed scrolls, avoid using steam to loosen material in plugged piping (please see §16, Other Information).</p>	<p>Store in-doors in temperature and humidity-controlled areas between 40–85° F (5–30° C) and 40–65% relative humidity to avoid caking.</p> <p>In case of caking in large capacity storage vessels, personnel working inside the vessel should not stand under large cakes of sugar which could break loose and fall on those personnel.</p>

Section 8	Exposure Controls/Personal Protection	<p>None normally required. Dust is not normally a consideration with brown sugars.</p> <p>Wearing of contact lenses when handling product should be avoided.</p>		<p>In cases of water being used to flush spilled material, floors and steps may become sticky; wear non-slip footwear and use caution when negotiating floors and steps.</p>	
Section 9	Physical and Chemical Properties	Melting Point	160–186° C (320–367° F)	Flash Point	N/A
		Boiling Point	N/A	Flammable Limits	N/A
		Specific Gravity (H ₂ O = 1)	1.587	LEL	N/A
		Vapor Pressure (mm Hg.)	5.15E-17	UEL	N/A
		Vapor Density (AIR = 1)	N/A	Appearance and Odor: Light or dark brown, slightly moist, crystalline solid; molasses odor.	
		Evaporation Rate Butyl (Acetate = 1)	N/A		
		Greater than 67% @ 25° C			
Section 10	Stability and Reactivity	<p>Stable under ordinary conditions of use and storage. Hazardous polymerization will NOT occur.</p> <p>Avoid temperatures above 160° F; heat, flames, ignition sources, and incompatibles</p>		<p>Avoid strong oxidizers (e.g. nitric acid or sulfuric acid).</p> <p>Thermal decomposition or burning will produce carbon dioxide, carbon monoxide</p>	

Section 11	Toxicological Information	Non-toxic	Product contains no ingredients currently classified as carcinogenic by NTP, IARC, or OSHA.
Section 12	Ecological Information (non-mandatory)	Non-toxic and biodegradable	
Section 13	Disposal Considerations (non-mandatory)	Whatever cannot be saved for recovery may be discarded as permitted by applicable regulations.	
Section 14	Transport Information (non-mandatory)	Not applicable	
Section 15	Regulatory Information (non-mandatory)	Not ordinarily regulated. (Note some countries do have import quotas which restrict total amount of sugar entering their borders.)	
Section 16	Other Information	Note: though brown sugars are moist due to molasses content, it is conceivable that large amounts of brown sugar could dry out due to improper storage and handling; the dust of the dried sugar 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 exposable concentration in air	0.045 g/L
		Very rarely, hot sugar products and their syrups have been known to exhibit “ runaway behavior ” under the <i>combined conditions</i> of (1) presence of amino acids; (2) enclosed space including piping where pressure can build up; (3) temperatures above 110° C; (4) extended periods of time (generally less than 5 hours); (5) lowered pH; (6) increased viscosity; (7) lack of adequate thermal transfer. Though extremely rare, explosions have been known to occur under these <i>combined conditions</i> . See Platje, T. et al. (2006): “Study of the ‘Runaway Behavior’ of Technical Sucrose Solutions.” <i>Zuckerindustrie</i> 131, 231–238. Avoid using steam to loosen material in plugged piping.	
		Preparation Date: 10/10/2023 Revised: New	

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