



AMERICAN CRYSTAL SUGAR COMPANY

# GHS SAFETY DATA SHEET

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

<p><b>Section 1</b></p>	<p><b>Identification</b></p>	<p><b><u>CONCENTRATED</u></b>  <b><u>SEPARATOR BYPRODUCT</u></b>  <b><u>(CSB),</u></b>  <b><u>RAFFINATE</u></b></p> <p>Manufacturer's Name  <b>American Crystal Sugar Co.</b>  <b>101 North 3<sup>rd</sup> Street</b>  <b>Moorhead, MN 56560</b></p> <p>Emergency Telephone Number:  <b>(218) 236-4400</b></p> <p>Telephone Number for Information  <b>(218) 236-4324</b></p>	<p>Used for supplemental dietary nitrogen in livestock (not for human consumption);</p> <p>Principal component in roadway deicer</p> <p>No restrictions on use</p> <p>Preparation Date: 11 Dec 2014</p> <p>Revised: <span style="border: 1px solid black; padding: 2px;">14 Jan 2015</span></p>						
<p><b>Section 2</b></p>	<p><b>Hazard(s) Identification</b></p>	<ul style="list-style-type: none"> <li>• <b>No Hazardous Components</b></li> <li>• CSB is non-hazardous under normal conditions of use, storage, and handling.</li> <li>• CSB is not considered combustible though in a dried state the organic components may provide <b>secondary fuel</b> for an existing fire.</li> </ul>							
<p><b>Section 3</b></p>	<p><b>Composition / Information on Ingredients</b></p>	<p><b>An aqueous, concentrated mixture of soluble byproduct (mainly potassium sulfate and amino acids—composition may vary); from the processing of the sugar beet root (<i>Beta vulgaris</i>) from which &gt;85% of the sucrose has been removed.</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Ash (5 – 10% potassium sulfate, CAS 7778-80-5, + small amounts of other salts)</td> <td style="text-align: right; padding: 5px;">15 – 20%</td> </tr> <tr> <td style="padding: 5px;">Water, CAS 7732-18-5</td> <td style="text-align: right; padding: 5px;">35 – 40%</td> </tr> <tr> <td style="padding: 5px;">Miscellaneous small amounts of water-soluble organics, including sucrose, CAS 57-50-1, and various amino acids in small and variable quantities</td> <td style="text-align: right; padding: 5px;">40 – 50%</td> </tr> </table>		Ash (5 – 10% potassium sulfate, CAS 7778-80-5, + small amounts of other salts)	15 – 20%	Water, CAS 7732-18-5	35 – 40%	Miscellaneous small amounts of water-soluble organics, including sucrose, CAS 57-50-1, and various amino acids in small and variable quantities	40 – 50%
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<p><b>Section 4</b></p>	<p><b>First Aid Measures</b></p>	<p><b>SKIN:</b> Redness and/or blistering of skin. If hot material gets on skin, flush affected area with cool water; seek medical attention in case of thermal burns. Sensitive skin may be irritated by continued contact with product.</p> <p><b>EYES</b> (irritation of eyes ): immediately flush with running water, holding eyelids open. Get medical help if symptoms persist.</p>	<p><b>ALLERGIC REACTIONS:</b> It is conceivable spore-forming molds could grow under conditions required for their growth. In the event of exposure to these spores, susceptible individuals may require specialized medical attention.</p> <p>Non-toxic, but non-palatable; contains bitter-tasting salts and organics.</p>
<p><b>Section 5</b></p>	<p><b>Fire-Fighting Measures</b></p>	<p><b>If material has solidified, use hot water or other approved media.</b></p> <p><b>Normal fire dept SOP for precautions and PPE.</b></p>	<p><b>Thermal decomposition or burning may produce ammonia, and oxides of carbon, nitrogen, sulfur, and potassium.</b></p>
<p><b>Section 6</b></p>	<p><b>Accidental Release Measures</b></p>	<p>Material is non-toxic and biodegradable.</p> <p>Barricade tape slippery floor spills and clean up immediately. Collect with some mechanical device; dilute and wash down with warm water.</p> <p>Material may be hot and is slippery. Clean-up personnel should wear proper protective equipment: goggles or face shield, thermal insulating gloves and non-slip boots.</p>	<p>Spilled material may be pumped into a closed tank for recovery or disposal, or return to manufacturer for reprocessing. Whatever cannot be saved for recovery may be discarded as permitted by applicable regulations.</p>
<p><b>Section 7</b></p>	<p><b>Handling and Storage</b></p>	<p><b>Conditions to Avoid:</b> Avoid excessively high temperatures. However, cold conditions will increase viscosity. If product temperature is kept between 80 to 120 °F (27 to 50 °C) flowability will be maintained and decomposition prevented.</p> <p><b>Salts in product may corrode some metals (notably mild steel and aluminum).</b></p>	<p>It has been noted the high temperature of steam used in steam cleaning of tanks may cause the salts in the product to cake and be difficult to remove; a hot water rinse may be more suitable for removal of unwanted deposits and residues.</p>

<b>Section 8</b>	<b>Exposure Controls / Personal Protection</b>	None normally required. In case of hot material, wear goggles, and thermal-protective gloves and boots.  <b>Sensitive skin may be irritated by continued contact with product; transferring product using high temperatures may cause burns.</b>		In cases of water being used to flush spilled material, floors and steps may become sticky. Use proper footwear when negotiating floors and steps.
<b>Section 9</b>	<b>Physical and Chemical Properties</b>	Melting Point	N/A	<b>Flash Point</b> N/A
		Boiling Point	N/A	<b>Flammable Limits</b> N/A
		Specific Gravity (H <sub>2</sub> O = 1)	<b>1.348 – 1.385</b>	<b>LEL</b> N/A
		Evaporation Rate (Butyl Acetate = 1)	N/A	<b>UEL</b> N/A
		Vapor Pressure (mm Hg)	N/A	<b>Appearance and Odor:</b> Black colored, slightly viscous, bitter taste, amine odor.
		pH	<b>7 – 9</b>	
		Solubility in Water:	<b>infinitely soluble</b>	
<b>Section 10</b>	<b>Stability and Reactivity</b>	<p><b>Stable under ordinary conditions of use and storage. Hazardous polymerization will NOT occur.</b></p> <p><b>Thermal decomposition or burning of dried material may produce ammonia, and oxides of carbon, nitrogen, sulfur, and potassium.</b></p> <p>Though highly unlikely with amounts contained in CSB, potassium sulfate in solid (dried) form has been found to explode when heated with aluminum or magnesium.</p>		<p><b>Avoid strong oxidizers such as nitric acid or sulfuric acid, hot acids.</b></p> <p><b>Avoid temperatures above 120 °F, pH less than 7, and incompatibles.</b></p> <p><b>Corrosive to mild steel, possibly other metals, notably aluminum.</b></p>
<b>Section 11</b>	<b>Toxicological Information</b>	<p>Non-toxic</p> <p>Oral, rat: LD50 = 6600 mg/kg</p> <p>CAS# 7778-80-5 is listed on the TSCA Inventory.</p>		Product contains no ingredients currently classified as carcinogenic by NTP, IARC, ACGIH, or OSHA.
<b>Section 12</b>	<b>Ecological Information (non-mandatory)</b>	Non-toxic and biodegradable.		
<b>Section 13</b>	<b>Disposal Considerations (non-mandatory)</b>	Whatever cannot be saved for recovery may be discarded as permitted by applicable regulations.		Note corrosiveness of metals due to high salt content.

<b>Section 14</b>	<b>Transport Information (non-mandatory)</b>	Not dangerous material.
<b>Section 15</b>	<b>Regulatory Information (non-mandatory)</b>	Not ordinarily regulated. (Note some countries do have import quotas which restrict total amount of sugar entering their borders.)
<b>Section 16</b>	<b>Other Information</b>	<p><b>Slippery! Avoid excessively high temperatures. However, cold conditions will increase viscosity. If product temperature is kept between 80 – 120 °F (27 – 50 °C), flowability will be maintained and decomposition prevented.</b></p> <p><b>Corrosive to some metals.</b></p> <p><b>Caked salts may “set up” when using steam to clean out tanks and tank cars; hot water is a preferred solvent for cleaning out tanks.</b></p>