



**COLUMBUS CHEMICAL INDUSTRIES INC.**

P.O. BOX 8  
 COLUMBUS, WISCONSIN 53925-0008  
 (920) 623-2140  
 FAX (920) 623-2577

**Material Safety Data Sheet**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. 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)

**Benedict's, Qualitative, Solution**

**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.

**Section I**

Manufacturers /Distributor Address Number Street City State and Zip Code	Emergency Telephone Number
Columbus Chemical Industries	CHEMTREC 1-800-424-9300
N4335 Temkin Rd	Telephone Number for Information
Columbus, WI 53925-0008	920-623-2140
	Date Prepared
	10-06-2004
	Signature of Preparer (optional)

**Section II - Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS #	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Sodium Carbonate	497-19-8	Not available	Not available	Not available	5-10%
Sodium Citrate	6132-04-3	Not available	Not available	Not available	10-15%
Cupric Sulfate, Pentahydrate	7758-99-8	15 mg/m <sup>3</sup> TWA	Not available	Not available	1-2%
		(as Cu dust)			

**Section III - Physical/Chemical Characteristics**

Boiling Point	Not available	Specific Gravity (H <sub>2</sub> O = 1)	1.1486
Vapor Pressure (mm Hg)	Not available	Melting Point	Not available
Vapor Density (AIR = 1)	Not available	Evaporation Rate (Butyl Acetate = 1)	Not available
Solubility in Water	soluble		
Appearance and Odor	Translucent blue solution		

**Section IV Fire and Explosion Hazard Data**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Non flammable		Not applicable	Not applicable
Extinguishing Media	Use water spray, dry chemical, or carbon dioxide to extinguish supporting fire.		

Special Fire Fighting Procedures  
 In the event of a fire, wear full protective clothing and NIOSH/MSHA-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosion Hazards  
 Emits toxic fumes under fire conditions.

**Section V Reactivity Data**

Stability	Unstable		Conditions to Avoid	None known
	Stable	X		

Incompatibility Materials to Avoid

**Hazardous Decomposition or Byproducts**

Carbon oxides, copper oxides, sodium oxides

**Hazardous Polymerization****Conditions to Avoid**

	May Occur		Not available.
	Will Not Occur	X	

**Section VI Health Hazard Data****Routes of Entry****Inhalation ?****Skin ?****Ingestion ?**

	Yes	Yes	Yes
--	-----	-----	-----

**Health Hazards (Acute and Chronic)**

SKIN: May cause irritation EYE: May cause eye irritation. INHALATION: May be irritating if inhaled. Material may be irritating to the mucous membranes and upper respiratory tract. INGESTION: May be harmful if swallowed.

**Carcinogenicity****NTP****IARC Monographs****OSHA REGULATED?**

	Not listed	Not listed	Not listed
--	------------	------------	------------

**Signs and Symptoms of Exposure.**

Irritation to eyes, skin, mucous membranes and upper respiratory tract characterized by itching, swelling, redness and pain. Gastrointestinal discomfort and possible pain upon ingestion.

**Medical Conditions Generally Aggravated by Exposure**

Unknown to CCI.

**Emergency and First Aid Procedures**

EYES /SKIN: Immediately flush with large amounts of water for at least 15 minutes.

Remove contaminated clothing. Assure adequate flushing of eyes by separating eyelids with fingers. INHALATION: remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. INGESTION:

**DO NOT** induce vomiting. Give large amounts of water. GENERAL: Wash contaminated clothing.

**Section VII Precautions for Safe Handling and Use****Steps to be Taken in Case Material is Released or Spilled**

Evacuate unprotected personnel from area. Wear rubber boots, heavy protective gloves and chemical safety goggles. Contain spill with dikes, sand or noncombustible absorbent material. Sweep up, place in a plastic bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

**Waste Disposal Method** Dispose of material in accordance with all applicable Federal, state, and local regulations.

**Precautions to be Taken in Handling and Storing**

Store in a cool, dry, well-ventilated area in tightly-closed, plainly-labelled containers. Store in a corrosion-resistant container. Protect against moisture, physical damage and light. Maintain adequate ventilation. Wash thoroughly after handling. Protect exposed tissues.

**Other Precautions** Containers, even when empty, will retain residue and vapors. Always obey hazard warnings and handle empty containers as if they were full.

**Section VII Control Measures****Respiratory Protection (Specify Type)**

NIOSH / MSHA-approved respirator with dust/mist cartridge.

**Ventilation****Local Exhaust** Recommended.**Special** Eyewash nearby.**Mechanical (General)** Recommended.**Other** Safety shower nearby.**Protective Gloves** Appropriate chemical-resistant gloves.**Eye Protection** Safety goggles.**Other Protective Clothing or Equipment** Lab coat or apron, boots, dust-mask.**Work /Hygienic Practices** Do **NOT** wear contact lenses when handling material. Wear appropriate personal protective

Wash thoroughly after handling. Do not breath vapors. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash contaminated clothing before reuse.

Columbus Chemical Industries, Inc. ("Columbus") believes that the information herein is factual but it is not intended to be all inclusive. The information relates only to the specific Material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because Columbus has no continuing control over the Material, those handling, storing or using the Material should satisfy themselves that they have current information regarding the particular way the Material is handled, stored and used and that the same is done in accordance with federal, state and local law. COLUMBUS MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR