

Material Safety Data Sheet

1. PRODUCT and COMPANY IDENTIFICATION

Product: Benedicts Solution**Product Code(s):** CS-B1025**Synonyms:** Not available**Distributor:** COSCO – The Science Company

95 Lincoln Street, Denver, CO 80203

Ph: (303)777-3777 or (800) 372-6726 Fax: (303)777-3331

**IN CASE OF HEALTH EMERGENCY
CALL****POISON CONTROL: (800)222-1222**

All non-emergency questions may be directed to customer service (800) 372-6726 or www.sciencecompany.com

2. COMPOSITION and INFORMATION on INGREDIENTS

<u>Ingredients</u>	<u>CAS#</u>	<u>Chemical Formula</u>	<u>Formula Weight</u>	<u>Hazardous</u>	<u>% by Weight</u>
Sodium Citrate Dihydrate	6132-04-3	C ₆ H ₅ Na ₃ O ₇ ·2H ₂ O	294.1	No	17-18
Sodium Carbonate Anhydrous	497-19-8	Na ₂ CO ₃	105.99	Yes	10
Copper Sulfate Pentahydrate	7758-99-8	CuSO ₄ ·5H ₂ O	249.68	Yes	1-2
Water	7732-18-5	H ₂ O	18.015	No	>70

3. HAZARDS IDENTIFICATION

Emergency Overview:**MAY CAUSE IRRITATION TO SKIN, EYES, RESPIRATORY TRACT, AND/OR GASTROINTESTINAL TRACT. MAY BE HARMFUL IF SWALLOWED. INHALED, OR ABSORBED THROUGH SKIN.****SAFETY RATINGS:** Health: 2, Moderate Reactivity: 0, None
Flammability: 0, None Contact: 1, Slight**Protective Equipment:** Chemical Safety Glasses/Goggles, Lab Coat/Apron, Gloves**Storage Code:** Green: General**Potential Health Effects:****INHALATION:**

May cause irritation.

INGESTION:

May be harmful. May cause nausea, vomiting, headache and diarrhea.

SKIN CONTACT:

May cause irritation.

EYE CONTACT:

May cause irritation.

POTENTIAL CHRONIC HEALTH EFFECTS:

No information found

MEDICAL CONDITIONS GENERALLY AGGRAVATED by EXPOSURE:

Repeated or prolonged exposure is not known to aggravate medical conditions.

4. FIRST AID MEASURES

INHALATION:

Remove to fresh air. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. If irritation persists, get medical attention.

INGESTION:

Give several glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

SKIN CONTACT:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If irritation persists, get medical attention.

EYE CONTACT:

Check for and remove contact lenses. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If irritation develops, get medical attention.

5. FIRE FIGHTING MEASURES

NFPA RATINGS: Health: 2 Flammability: 0 Reactivity: 0

FIRE:

Not considered to be a fire hazard.

EXPLOSION:

Not considered to be an explosion hazard.

FIRE EXTINGUISHING MEDIA:

Use any means suitable for extinguishing surrounding fire.

SPECIAL INFORMATION:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment as specified in the Exposure Control and Personal Protection Section 8. Contain and recover liquid when possible. Absorb liquid with an inert material (e.g. vermiculite, dry sand, earth), and place in a suitable container for reclamation or disposal. Do not use combustible materials, such as sawdust. Do not flush to sewer. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

7. HANDLING and STORAGE

Store in a cool, dry, ventilated area. Keep containers tightly closed and upright. Protect from physical damage and freezing. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid). Observe all warnings and precautions listed for the product. Storage and use areas should be non-smoking. Wash thoroughly after handling.

8. EXPOSURE CONTROL and PERSONAL PROTECTION

EXPOSURE LIMITS:

None established

VENTILATION SYSTEM:

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

PERSONAL RESPIRATORS (NIOSH) APPROVED:

Not expected to require use of a personal respirator.

SKIN PROTECTION:

Wear protective clothing, gloves, lab coat or apron, as appropriate, to prevent skin contact.

EYE PROTECTION:

Use chemical safety glasses or goggles. Maintain approved eye wash station in work area.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE:	Dark blue liquid
ODOR:	No odor
SOLUBILITY:	Miscible with water
SPECIFIC GRAVITY:	1.0-1.2
pH:	No information available
% VOLATILES by VOLUME:	No information available
BOILING POINT:	No information available
MELTING POINT:	No information available
VAPOR DENSITY (Air =1):	No information available
VAPOR PRESSURE (mm Hg):	No information available
EVAPORATION RATE (BuAc=1):	No information available

10. STABILITY and REACTIVITY

STABILITY:

Stable under ordinary conditions of use and storage

HAZARDOUS DECOMPOSITION PRODUCTS:

No information available

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Strong oxidizers and acids

CONDITIONS to AVOID:

Heat, incompatibilities

11. TOXICOLOGICAL INFORMATION**TOXICOLOGICAL DATA:**

No information found

CHRONIC HEALTH EFFECTS:

No information found

CARCINOGENIC EFFECTS:

Not known to cause cancer

12. ECOLOGICAL INFORMATION**ENVIRONMENTAL FATE:**

No information found.

ENVIRONMENTAL TOXICITY:

No information found.

13. DISPOSAL INFORMATION

Whatever cannot be saved for recovery or recycling should be handled as potentially hazardous waste and disposed of or incinerated at an approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION**TRANSPORT (Land, DOT):**

Not regulated

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: This product contains one or more chemicals that are considered "Hazardous Chemicals" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

U.S. EPA TSCA 8(b) Inventory: Water, Sodium Citrate *Anhydrous*, Sodium Carbonate, Cupric Sulfate *Anhydrous*

US EPCRA (SARA Title III) Sections 311/312:

<u>Hazard Categories</u>	<u>List (Yes/No)</u>
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

US EPCRA (SARA Title III) Section 313 – Toxics Release Inventory: Copper Sulfate Pentahydrate

CERCLA (Superfund) Reportable Quantity: Copper Sulfate Pentahydrate: 10 lbs

INVENTORY STATUS:

<u>Country(s) or Region</u>	<u>Inventory Name</u>	<u>On Inventory (Yes/No)*</u>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	N/A
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed component(s) of this product (or their anhydrous forms) comply with the inventory requirements administered by the governing country(s).

16. OTHER INFORMATION

PRODUCT USE:

For manufacturing, industrial and laboratory use only, not for household use.

DISCLAIMER:

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