

Benedict's Reagent Qualitative

Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name Benedict's Reagent Qualitative

Product Code VW3384

Manufacturer EMD Chemicals Inc.

P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027

Effective Date 3/4/2003

Prior to January 1, 2003 EMD Chemicals Inc. was
EM Industries, Inc. or EM Science, Division of
EM Industries, Inc.

For More Information Call

856-423-6300 Technical Service
Monday-Friday: 8:00 AM - 5:00 PM

In Case of Emergency Call

800-424-9300 CHEMTREC
(USA)
613-996-6666 CANUTEC
(Canada)
24 Hours/Day: 7 Days/Week

Synonym None.

Material Uses Laboratory Reagent

Chemical Family Solution.

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Sodium Citrate	6132-04-3	17.3
SODIUM CARBONATE, ANHYDROUS	497-19-8	10
Cupric Sulfate, pentahydrate	7758-99-8	1.73
Water	7732-18-5	>71

Section 3. Hazards Identification

Physical State and Appearance Liquid.

Emergency Overview

CAUTION !
HARMFUL IF INHALED.
CAUSES EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Routes of Entry Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.

Skin Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Hazardous in case of inhalation. May be hazardous in case of inhalation (lung irritant).

Ingestion May be hazardous in case of ingestion.

Potential Chronic Health Effects

Carcinogenic This material is not known to cause cancer in animals or humans.

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Effects

Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 5. Fire Fighting Measures

Flammability of the Product Non-flammable.

Auto-ignition Temperature Not applicable.

Flash Points Not applicable.

Flammable Limits Not applicable.

Products of Combustion Not applicable.

Fire Hazards in Presence of Various Substances Not applicable.

Explosion Hazards in Presence of Various Substances Risks of explosion of the product in presence of static discharge: No.
Risks of explosion of the product in presence of mechanical impact: No.

Fire Fighting Media and Instructions Not applicable.

Protective Clothing (Fire) Not applicable.

Special Remarks on Fire Hazards Not available.

Special Remarks on Explosion Hazards Not available.

Section 6. Accidental Release Measures

Small Spill and Leak Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

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Large Spill and Leak Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Spill Kit Information No specific spill kit required for this product.

Section 7. Handling and Storage

Handling Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Wash thoroughly after handling.

Storage Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

Protective Clothing

(Pictograms)

Personal Protection in Case of a Large Spill Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name

Sodium Citrate

SODIUM CARBONATE,
ANHYDROUS

Cupric Sulfate, pentahydrate

Exposure Limits

Not available.

Not available.

BAUA (Germany, 1997).

Spitzenbegrenzung: 4 mg/m³

MAK: 1 mg/m³

Tyterveyslaitos (Finland, 1998).

TWA: 1 mg/m³

AFS (Sweden, 1996).

NGV: 1 mg/m³

Water

Not available.

Section 9. Physical and Chemical Properties

Odor Odorless.

Color Clear , Dark Blue

Physical State and Liquid.

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Appearance

Molecular Weight Not applicable.

Molecular Formula Not applicable.

pH Not available.

Boiling/Condensation Point The lowest known value is 99.9°C (211.8°F) (Water).

Point

Melting/Freezing Point May start to solidify at -0.1°C (31.8°F) based on data for: Water.

Point

Specific Gravity Not available.

Vapor Pressure Not available.

Vapor Density Not available.

Odor Threshold Not available.

Evaporation Rate 0.36 (Water) compared to (n-BUTYL ACETATE=1)

LogKow Not available.

Solubility Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions of

Not available.

Instability

Incompatibility with Various Substances Reactive with acids, alkalis.

Slightly reactive to reactive with oxidizing agents.

Rem/Incompatibility Incompatible with some strong acids. Incompatible with sulfur chloride, thionyl chloride, titanium trichloride.

Hazardous Decomposition Products Not available.

Hazardous

Products

Hazardous Polymerization Will not occur.

Section 11. Toxicological Information

RTECS Number:

Sodium Citrate Not available.

Sodium Carbonate VZ4050000

Cupric Sulfate, pentahydrate GL8900000

Water ZC0110000

Toxicity Acute oral toxicity (LD50): 300 mg/kg [Rat]. (Cupric Sulfate, pentahydrate).

Acute toxicity of the vapor (LC50): 800 mg/m³ 2 hour(s) [Guinea pig]. (SODIUM CARBONATE, ANHYDROUS).

Chronic Effects on Humans Not available.

Humans

Acute Effects on

Humans

Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation. May be hazardous in case of inhalation (lung irritant). May be hazardous in case of ingestion.

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Special Remarks on Other Toxic Effects on Humans	MAY BE IRRITATING ON CONTACT WITH MUCOUS MEMBRANES.
Synergetic Products (Toxicologically)	Not available.
Irritancy	Draize Test: Not available.
Sensitization	Not available.
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.
Toxicity to Reproductive System	Not available.
Teratogenic Effects	Not available.
Mutagenic Effects	Not available.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

EPA Waste Number	Not available.
Treatment	Material does not have an EPA Waste number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished. ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

Section 14. Transport Information

DOT Classification	Not available.
TDG Classification	Not available.
IMO/IMDG Classification	Not available.
ICAO/IATA Classification	Not available.

Section 15. Regulatory Information

U.S. Federal Regulations	TSCA 8(b) inventory: Sodium Citrate; SODIUM CARBONATE, ANHYDROUS ; Cupric Sulfate, pentahydrate; Water SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: SODIUM CARBONATE, ANHYDROUS
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; Cupric Sulfate, pentahydrate
SARA 311/312 MSDS distribution – chemical inventory – hazard
identification: SODIUM CARBONATE, ANHYDROUS
: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard;
Cupric Sulfate, pentahydrate: Immediate (Acute) Health Hazard, Delayed
(Chronic) Health Hazard
SARA 313 toxic chemical notification and release reporting: No products
were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were
found.
Clean air act (CAA) 112 regulated flammable substances: No products
were found.
Clean air act (CAA) 112 regulated toxic substances: No products were
found.

WHMIS (Canada) Class D–2B: Material causing other toxic effects (TOXIC).
CEPA DSL: SODIUM CARBONATE, ANHYDROUS
; Water
This product has been classified in accordance with the hazard criteria of
the Controlled Product Regulations and the MSDS contains all required
information.

International Regulations

EINECS

Sodium Citrate Not available.
SODIUM CARBONATE, ANHYDROUS
207–838–8
Cupric Sulfate, pentahydrate Not available.
Water 231–791–2

DSCL (EEC)

International Lists

R36– Irritating to eyes.
Australia (NICNAS): Sodium Citrate; SODIUM CARBONATE,
ANHYDROUS
; Cupric Sulfate, pentahydrate; Water

Japan (MITI): SODIUM CARBONATE, ANHYDROUS
; Cupric Sulfate, pentahydrate; Water

Korea (TCCL): SODIUM CARBONATE, ANHYDROUS
; Water

Philippines (RA6969): Sodium Citrate; SODIUM CARBONATE,
ANHYDROUS
; Cupric Sulfate, pentahydrate; Water

China: No products were found.

State Regulations New Jersey: Benedict's Reagent Qualitative
California prop. 65: No products were found.

Section 16. Other Information

**National Fire
Protection
Association**

0 0

Health¹

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(U.S.A.)

Fire Hazard

Reactivity

Specific Hazard

**Changed Since Last
Revision** +

Notice to Reader

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