Material Safety Data Sheet

BIURET REAGENT

Revised: 07/13/2010
Replaces: 05/09/2010
Printed: 08/02/2010

Section 1 - Product Description

**Product Name:** Biuret Reagent  
**Product Code(s):** 84-8211, 84-8213, 84-8215, 20-2340, 20-2341, 10-1026  
**Size:** 1 oz, 120 mL, 500 mL, 4 L  
**Chemical Name:** Does not apply- product is a mixture.  
**CAS Number:** See Section 3  
**Formula:** See Section 3  
**Synonyms:** None known  
**Distributor:** Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F) Chemtrec 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

**Emergency Overview:** N/A  
**Potential Health Effects:**  
- **Eyes:** May cause irritation.  
- **Skin:** May cause irritation to skin.  
- **Ingestion:** May cause gastrointestinal discomfort.  
- **Inhalation:** May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

**Principal Hazardous Components:** Sodium Hydroxide (CAS# 1310-73-2) 16.7%; Copper Sulfate, 5-Hydrate (CAS# 7758-99-8) 1.7%; Ethylene Glycol (CAS# 107-21-1) 9.3%  
**TLV units:** ACGIH-TLV (Sodium Hydroxide) 2 mg/m3 (Ceiling)  
- ACGIH-TLV (Ethylene Glycol) 100 mg/m3 (Ceiling)  
- ACGIH-TLV (Cupric Sulfate, 5-Hydrate) 1 mg(Cu)/m3 (TWA)  
**PEL units:**  
- OSHA-PEL (Sodium Hydroxide) 2 mg/m3 (TWA)  
- OSHA-PEL (Ethylene Glycol) 50 ppm (Ceiling)  
- OSHA-PEL (Cupric Sulfate, 5-Hydrate) 1 mg(Cu)/m3 (TWA)

Section 4 - First Aid Measures

**Emergency and First Aid Procedures:**  
- **Eyes** - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin - After contact with skin, wash immediately with plenty of ... (Water, unless specified as water-reactive).
Ingestion - If swallowed, rinse mouth with water (only if the person is conscious). If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
Inhalation - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A
NFPA Rating:
  Health: 0
  Fire: 0
  Reactivity: 0
Extinguisher Media: Use media suitable to extinguish surrounding fire.
Flammable Limits in Air % by Volume: N/A
Autoignition Temperature: N/A
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: N/A

Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbent and containerize for disposal.

Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Harmful if swallowed. After contact with skin, wash immediately with plenty of ... (Water, unless specified as water-reactive). Keep in a cool place away from ... (incompatible materials to be indicated by the manufacturer). Keep container tightly closed in a cool, well-ventilated place.

Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.
Ventilation:
  Local Exhaust: Acceptable
  Mechanical(General): Preferred
  Special: No
  Other: No
Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.
Eye Protection: Splash proof chemical safety goggles should be worn.
Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

Section 9 - Physical Data

Molecular Weight: N/A
Boiling Point: N/A
Vapor Density(Air=1): N/A
Percent Volatile by Volume: N/A
Solubility in Water: Soluble
Melting Point: N/A
Vapor Pressure: N/A
Specific Gravity (H2O=1): N/A
Evaporation Rate (BuAc=1): N/A
Appearance and Odor: Dark Blue, odorless solution.
Section 10 - Reactivity Data

Stability: Stable
Conditions to Avoid: None Known
Incompatibility (Materials to Avoid): Water-reactive Material, Acids,
Hazardous Decomposition Products: Metal Fumes, COx,
Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: (Sodium Hydroxide) orl-rbt LDLo: 500 mg/kg
(Sodium Hydroxide) ipr-mus LD50: 40 mg/kg
(Ethylene Glycol) orl-hmn LDLo: 398 mg/kg
(Ethylene Glycol) ihl-hmn TCLo: 10000 mg/m3
(Cupric Sulfate, 5-Hydrate) orl-rat LD50 300 mg/kg
Effects of Overexposure:
Acute: See Section 2
Chronic: Mutation data cited. Not listed as a carcinogen by IARC, NTP or OSHA.
Conditions Aggravated by Overexposure: N/A
Target Organs: Central Nervous System, Kidneys, Liver, Skin,
Primary Route(s) of Entry: Inhalation and skin contact.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: UN1824, Sodium hydroxide solution, 8, II

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory
Hazard Category for SARA Section 311/312 Reporting: Acute Reaction

Name List: Chemical Category:
Ethylene Glycol: Yes Ethylene Glycol: No
Sodium Hydroxide: No Sodium Hydroxide: No
Cupric Sulfate, 5-Hydrate: No Cupric Sulfate, 5-Hydrate: Copper Compound

CERCLA Section 103 RQ(lb.): Ethylene Glycol: 5000
Sodium Hydroxide: 1000
Cupric Sulfate, 5-Hydrate: 10
RCRA Section 261.33: Ethylene Glycol: No
Sodium Hydroxide: No
Cupric Sulfate, 5-Hydrate: No
Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary
ACGIH       American Conference of Governmental Industrial Hygienists
CAS Number  Chemical Services Abstract Number
CERCLA      Comprehensive Environmental Response, Compensation, and Liability Act
DOT         U.S. Department of Transportation
IARC        International Agency of Research on Cancer
N/A         Not Available
NTP         National Toxicology Program
OSHA        Occupational Safety and Health Administration
PEL         Permissible Exposure Limit
ppm         Parts per million
RCRA        Resource Conservation and Recovery Act
SARA        Superfund Amendments and Reauthorization Act
TLV         Threshold Limit Value
TSCA        Toxic Substances Control Act