

Safety Data Sheet

Biuret Reagent

CAROLINA[®]
www.carolina.com

Section 1

Product Description

Product Name: Biuret Reagent
Recommended Use: Science education applications
Synonyms: Biuret Solution
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2

Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



Causes severe skin burns and eye damage.

GHS Classification:
Skin Corrosion/Irritation Category 1A

Section 3

Composition / Information on Ingredients

| <u>Chemical Name</u> | <u>CAS #</u> | <u>%</u> |
|---|--------------|----------|
| Water | 7732-18-5 | 90.38 |
| Sodium Hydroxide | 1310-73-2 | 6.42 |
| Potassium Sodium Tartrate, 4-hydrate | 6381-59-5 | 1.65 |
| Copper (II) Sulfate, 5-Hydrate | 7758-99-8 | 1.18 |
| Potassium Iodide | 7681-11-0 | 0.35 |
| Ethylenediaminetetraacetic Acid, Disodium Salt, Dihydrate (EDTA Sodium) | 6381-92-6 | 0.02 |

Section 4

First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Section 5

Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Copper compounds, Sodium Oxides, Potassium Oxide, Iodine (gas), Carbon dioxide, Carbon monoxide

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Section 6

Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Avoid breathing material. Avoid contact with skin and eyes.
Reduce airborne dust and prevent scattering by moistening with water. Ventilate the area by opening door and/or turning on fans and blowers. Avoid runoff into storm sewers and ditches that lead to waterways. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.

Section 7

Handling and Storage

Handling:

Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin.

Storage:

Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code:

White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

Section 8

Protection Information

| <u>Chemical Name</u> | <u>ACGIH</u> | | <u>OSHA PEL</u> | |
|--------------------------------------|--|---------------|-------------------------|---------------|
| | <u>(TWA)</u> | <u>(STEL)</u> | <u>(TWA)</u> | <u>(STEL)</u> |
| Sodium Hydroxide | N/A | N/A | 2 mg/m ³ TWA | N/A |
| Potassium Sodium Tartrate, 4-hydrate | N/A | N/A | N/A | N/A |
| Copper (II) Sulfate, 5-Hydrate | 1 mg/m ³ TWA (dust and mist, as Cu) | N/A | N/A | N/A |
| Potassium Iodide | 0.01 ppm TWA (inhalable fraction and vapor) | N/A | N/A | N/A |
| EDTA, Disodium Salt, Dihydrate | N/A | N/A | N/A | N/A |

Control Parameters

Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Respiratory Protection:

Lab coat, apron, eye wash, safety shower.

Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection. Wear chemical splash goggles when handling this product. Have an eye wash station available.

Respirator Type(s):

Eye Protection:

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Natural latex, Nitrile, Nitrile - Extra Thick (8 mm), Neoprene

Section 9

Physical Data

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Formula: This product is a mixture.
Molecular Weight: This product is a mixture.
Appearance: Blue Liquid
Odor: None
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: No data available
Flash Point: No data available
Flammable Limits in Air: No data available

Vapor Pressure: No data available
Evaporation Rate (BuAc=1): No data available
Vapor Density (Air=1): No data available
Specific Gravity: No data available
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: No data available

Section 10

Reactivity Data

Reactivity: Not generally reactive under normal conditions.
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Elevated temperatures
Incompatible Materials: Water-reactive materials, Strong reducing agents, Acids, Hydroquinone, Organic halides, Phosphorus, Alcohols, Metals, Aldehydes, Calcium Salts, Lead salts, Strong acids, Strong oxidizing agents, Silver Nitrate, Hydroxylamine, Hypobromite, Magnesium
Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide, Iodine (gas), Potassium Oxide, Sodium Oxides, Copper compounds
Hazardous Polymerization: Will not occur

Section 11

Toxicity Data

Routes of Entry: Ingestion, skin and eye contact.
Symptoms (Acute): Laxative effect
Delayed Effects: No data available

Acute Toxicity:

| Chemical Name | CAS Number | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------------------------|------------|------------------------------|---------------------------------|-----------------|
| Water | 7732-18-5 | Oral LD50 Rat 90000 mg/kg | | |
| Potassium Sodium Tartrate, 4-hydrate | 6381-59-5 | | | |
| Copper (II) Sulfate, 5-Hydrate | 7758-99-8 | Oral LD50 Rat = 300 mg/kg | Dermal LD50 Rat > 2000 mg/kg | |
| Potassium Iodide | 7681-11-0 | | | |
| EDTA, Disodium Salt, Dihydrate | 6381-92-6 | Oral LD50 Rat 2000 mg/kg | | |

Carcinogenicity:

| Chemical Name | CAS Number | IARC | NTP | OSHA |
|--------------------------------------|------------|------------|------------|------------|
| Sodium Hydroxide | 1310-73-2 | Not listed | Not listed | Not listed |
| Potassium Sodium Tartrate, 4-hydrate | 6381-59-5 | Not listed | Not listed | Not listed |
| Potassium Iodide | 7681-11-0 | Not listed | Not listed | Not listed |
| EDTA, Disodium Salt, Dihydrate | 6381-92-6 | Not listed | Not listed | Not listed |

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: Thyroid
Chronic: Thyroid

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Section 12

Ecological Data

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.
Mobility: No data
Persistence: Dissolved into water, Adsorbs to soil., Chemically Transformed, Photodegradation
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

| Chemical Name | CAS Number | Eco Toxicity |
|--------------------------------------|------------|---|
| Water | 7732-18-5 | No data available |
| Sodium Hydroxide | 1310-73-2 | Aquatic LC50 (96h) Rainbow Trout 45.4 MG/L |
| Potassium Sodium Tartrate, 4-hydrate | 6381-59-5 | |
| Copper (II) Sulfate, 5-Hydrate | 7758-99-8 | 96 HR LC50 PIMEPHALES PROMELAS 0.6752 MG/L [STATIC] |
| Potassium Iodide | 7681-11-0 | |
| EDTA, Disodium Salt, Dihydrate | 6381-92-6 | |

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): If discarded, this product is considered a RCRA corrosive waste, D002.

Section 14

Transport Information

Ground - DOT Proper Shipping Name:
UN1824
Sodium Hydroxide Solution
Class 8
P.G. III

Air - IATA Proper Shipping Name:
UN1824
Sodium Hydroxide Solution
Class 8
P.G. III

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Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

| Chemical Name | CAS Number | § 313 Name | § 304 RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) TQ |
|--------------------------------------|------------|------------|------------|-------------------------|-----------|---------------|
| Sodium Hydroxide | 1310-73-2 | No | 1000 lb RQ | 1000lb (454kg) final RQ | No | No |
| Potassium Sodium Tartrate, 4-hydrate | 6381-59-5 | No | No | No | No | No |
| Copper (II) Sulfate, 5-hydrate | 7758-99-8 | No | No | No | No | No |
| Potassium Iodide | 7681-11-0 | No | No | No | No | No |
| EDTA, Disodium Salt, Dihydrate | 6381-92-6 | No | No | No | No | No |

Section 16

Additional Information

Revised: 06/09/2017

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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.

Glossary

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