Biuret Reagent



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;





Causes severe skin burns and eye damage. Causes serious eye damage. Harmful to aquatic life.

GHS Classification:

Skin Corrosion/Irritation Category 1B, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the aquatic environment - Acute Category 3

Section 3 Composition / Information on Ingredients

Chemical Name	CAS#	<u>%</u>
Water	7732-18-5	90.3
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. IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Section 5

Ingestion:

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.

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Hazardous Combustion Products: Copper compounds, Sodium Oxides, Potassium Oxide, Iodine (gas), Carbon dioxide,

Carbon monoxide

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. Avoid release to the

environment. 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

	ACGIH		OSHA PEL		
Chemical Name	<u>(TWA)</u>	(STEL)	<u>(TWA)</u>	(STEL)	
Sodium Hydroxide	N/A	N/A	2 mg/m3 TWA	N/A	
Potassium Sodium Tartrate, 4-hydrate	N/A	N/A	N/A	N/A	
Copper (II) Sulfate, 5-Hydrate	1 mg/m3 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

Respirator Type(s):

Eve Protection:

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.

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

Formula: See Section 3

Molecular Weight: No data available

Appearance: Blue Liquid

Odor: None

Odor Threshold: No data available

pH: 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

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Melting Point: No data available Boiling Point: No data available

Flash Point: No data available

Flammable Limits in Air: No data available

Autoignition Temperature: No data available Decomposition Temperature: No data available

Viscosity: 10

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

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 dataDegradability:No dataOther Adverse Effects:No data

Chemical NameCAS NumberEco ToxicityWater7732-18-5No data available

Sodium Hydroxide 1310-73-2 Aquatic LC50 (96h) Rainbow Trout 45.4 MG/L

Potassium Sodium Tartrate, 4-hydrate 6381-59-5

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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

Disposal Information Section 13

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: Air - IATA Proper Shipping Name:

UN1824 UN1824

Sodium Hydroxide Solution Sodium Hydroxide Solution

Class 8 Class 8 P.G. III P.G. III

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

Replaces: 09/03/2014 Revised: 02/19/2015 Printed: 04-21-2015

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

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

IDLH

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