

## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Biuret Reagent TS

**Product Number:** 1025

**Other Identifying Product Numbers:** 1025-1, 1025-100, 1025-16, 1025-2.5, 1025-32, 1025-5

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** Ricca Chemical Company

**Address:** 448 West Fork Drive  
Arlington, TX 76012 USA

**Telephone:** 888-467-4222

#### 1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300  
CHEMTREC (International) 1+ 703-527-3887

### SECTION 2: Hazard(s) Identification

#### 2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

*For the full text of the Hazard and Precautionary Statements listed below, see Section 16.*

Hazard Class	Category	Hazard Statement	Precautionary Statements
Skin Corrosion / Irritation	Category 1A	H314	P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Reproductive Toxicity	Category 2	H361	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, P405, P501
Corrosive to Metals	Category 1	H290	P234, P390, P406

## Safety Data Sheet

### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.



## Safety Data Sheet

### Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P260	Do not breathe dust, fumes or mist.
P261	Avoid breathing dust, fumes or mist.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves and eye protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P321	Specific treatment (Wash areas of contact with water immediately).
P332+P313	If skin irritation occurs: Get medical attention.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

### 2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

### 2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.



## Safety Data Sheet

### SECTION 3: Composition / Information on Ingredients

#### 3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H <sub>2</sub> O	18.01 g/mol	7732-18-5	94.51%
Sodium Hydroxide	NaOH	39.99 g/mol	1310-73-2	4.78%
Potassium Sodium Tartrate Tetrahydrate	KNaC <sub>4</sub> H <sub>4</sub> O <sub>6</sub> ·4H <sub>2</sub> O	282.22 g/mol	6381-59-5	0.57%
Copper Sulfate Pentahydrate	CuSO <sub>4</sub> ·5H <sub>2</sub> O	249.68 g/mol	7758-99-8	0.14%

### SECTION 4: First-Aid Measures

#### 4.1. General First Aid Information

**Eye Contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

**Inhalation:** Not expected to require first aid. If necessary, remove to fresh air.

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation and burns.

**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

#### 4.2. Most Important Symptoms and Effects, Acute and Delayed

Mildly corrosive. Wash areas of contact with water. Call a physician if irritation develops. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation and burns. CHRONIC EFFECTS / CARCINOGENICITY: Dermatitis may develop from repeated exposures to dilute Sodium Hydroxide Solutions.

#### 4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately).

### SECTION 5: Fire-Fighting Measures

#### 5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

#### 5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

#### 5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

### SECTION 6: Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.



## Safety Data Sheet

### 6.2. Cleanup and Containment Methods and Materials

Collect liquid and dilute with water. Do not flush to sewer. Containerize for proper disposal. For larger spills, absorb with suitable material (vermiculite, clay, etc.). Collect the solid residue and save for disposal.

## SECTION 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Do not mix with acids.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Copper Sulfate Pentahydrate (7758-99-8)	TLV-TWA	USA	1 mg/m <sup>3</sup> TWA (dust and mist, as Cu)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Sodium Hydroxide (1310-73-2)	TWA	USA	2 mg/m <sup>3</sup> TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Hydroxide (1310-73-2)	TLV-Ceiling	USA	2 mg/m <sup>3</sup> Ceiling	ACGIH - Threshold Limit Values - Ceilings (TLV-C)

### 8.2. Exposure Controls

**Engineering Controls:** No specific controls are needed. Normal room ventilation is adequate.

**Respiratory Protection:** Normal room ventilation is adequate.

**Skin Protection:** Wear protective gloves and eye protection. Chemical resistant gloves.

**Eye Protection:** Wear protective gloves and eye protection. Safety glasses or goggles.

### 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.



## Safety Data Sheet

### SECTION 9: Physical and Chemical Properties

#### 9.1. Basic Physical and Chemical Properties

**Appearance:** Blue liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** > 12

**Melting/Freezing Point:** Approximately 0°C

**Initial Boiling Point /Range:** Approximately 100°C - Approximately 100°C

**Flash Point:** Data not available.

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** Data not available.

**Vapor Density:** Data not available.

**Relative Density:** 1.05

**Solubility:** Miscible

**Partition Coefficient (n-Octanol/Water):** Data not available.

**Auto-Ignition Temperature:** Data not available.

**Decomposition Temperature:** Data not available.

**Viscosity:** Data not available.

**Explosive Properties:** Data not available.

**Oxidizing Properties:** Data not available.

### SECTION 10: Stability and Reactivity

#### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

#### 10.2. Possibility of Hazardous Reactions

Data not available.

#### 10.3. Conditions to Avoid and Incompatible Materials

Keep only in original container. Acids, organic halogen compounds, metals such as aluminum, tin and zinc.

#### 10.4. Hazardous Decomposition Products

Will not occur.



## Safety Data Sheet

### SECTION 11: Toxicological Information

#### 11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**

Not applicable.

**Acute Toxicity - Dermal Exposure:**

Not applicable.

**Acute Toxicity - Inhalation Exposure:**

Not applicable.

**Acute Toxicity - Other Information:**

LD50, Oral, Rat: (Copper Sulfate) 300 mg/kg, details of toxic effects not reported other than lethal dose value. Sodium Hydroxide: Irritation data: skin, rabbit: 500 mg/24H severe; eye, rabbit: 50 ug/24H severe. Investigated as a mutagen (Copper Sulfate and Sodium Hydroxide).

**Skin Corrosion and Irritation:**

Causes severe skin burns and eye damage. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Serious Eye Damage and Irritation:**

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Respiratory Sensitization:**

Not applicable.

**Skin Sensitization:**

May cause an allergic skin reaction. Avoid breathing dust, fumes or mist. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

Suspected of damaging fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.



## Safety Data Sheet

### **Specific Target Organ Toxicity from Single Exposure:**

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

### **Specific Target Organ Toxicity from Repeated Exposure:**

Not applicable.

### **Aspiration Hazard:**

Not applicable.

### **Additional Toxicology Information:**

Data not available.

## SECTION 12: Ecological Information

### **12.1. Ecotoxicity**

Not applicable.

### **12.2. Persistence and Degradability**

Data not available.

### **12.3. Bioaccumulative Potential**

Data not available.

### **12.4. Mobility in Soil**

Data not available.

### **12.5. Other Adverse Ecological Effects**

Data not available.

## SECTION 13: Disposal Considerations

### **13.1. Waste Treatment Methods**

Data not available.

## Safety Data Sheet

### SECTION 14: Transportation Information

#### 14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

**Sizes:** 1 L, 4 L, 10 L, 20 L, 100 mL, 500 mL

**UN Number:** UN3266

**Proper Shipping Name:** Corrosive Liquid, Basic, Inorganic, n.o.s. (Sodium Hydroxide)

**Hazard Class:** 8

**Packing Group:** III

**Hazard Placard Labels:**



**Sizes:**

**UN Number:**

**Proper Shipping Name:**

**Hazard Class:**

**Packing Group:**

**Hazard Placard Labels:**

#### 14.2. Transportation by Air - International Air Transport Association (IATA)

**Sizes:** 1 L, 4 L, 10 L, 20 L, 100 mL, 500 mL

**UN Number:** UN3266

**Proper Shipping Name:** Corrosive Liquid, Basic, Inorganic, n.o.s. (Sodium Hydroxide)

**Hazard Class:** 8

**Packing Group:** III

**Hazard Placard Labels:**



### SECTION 15: Regulatory Information

#### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.



## Safety Data Sheet

### 15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

### 15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Sodium Hydroxide (CAS # 1310-73-2): 1000 lb final RQ; 454 kg final RQ

Copper Sulfate Pentahydrate (CAS # 7758-99-8): 10 lb final RQ; 4.54 kg final RQ

### 15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Copper Sulfate Pentahydrate (CAS # 7758-99-8): 1.0 % de minimis concentration (This category does not include CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine., listed under Chemical Category N100)

### 15.5. Massachusetts Right-to-Know Substance List

Sodium Hydroxide (CAS # 1310-73-2): Present

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Sodium Hydroxide (CAS # 1310-73-2): Environmental hazard

Sodium Hydroxide (CAS # 1310-73-2): Present

Water (CAS # 7732-18-5): Present

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Environmental hazard

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

### 15.7. New Jersey Worker and Community Right-to-Know Components

Sodium Hydroxide (CAS # 1310-73-2): corrosive

Sodium Hydroxide (CAS # 1310-73-2): sn 1706

Copper Sulfate Pentahydrate (CAS # 7758-99-8): sn 0549

Copper Sulfate Pentahydrate (CAS # 7758-99-8): sn 2215

Copper Sulfate Pentahydrate (CAS # 7758-99-8): SN 2215 500 lb TPQ (except C.I. Pigment Blue 15, C.I. Pigment Green 7, and C.I. Pigment Green 36, Category Code N100)

### 15.8. California Proposition 65

Not listed.

### 15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Sodium Hydroxide (CAS # 1310-73-2): Present (DSL)

Potassium Sodium Tartrate Tetrahydrate (CAS # 6381-59-5): Present (DSL)

Water (CAS # 7732-18-5): Present (DSL)

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present (DSL)

### 15.10. United States of America Toxic Substances Control Act (TSCA) List

Sodium Hydroxide (CAS # 1310-73-2): Present

Potassium Sodium Tartrate Tetrahydrate (CAS # 6381-59-5): Present

Water (CAS # 7732-18-5): Present

Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

## Safety Data Sheet

### 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Suspected of damaging fertility or the unborn child. Causes damage to organs.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). If skin irritation occurs: Get medical attention. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store locked up. Store in corrosive resistant container with a resistant inner liner.

Dispose of contents in accordance with local, state, federal and international regulations.

### 16.2. Miscellaneous Hazard Classes

**Canadian Carcinogenicity Hazard Class:** Not Applicable.

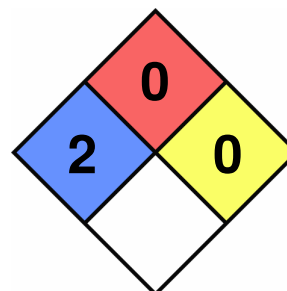
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.

Not Applicable.

### 16.3. National Fire Protection Association (NFPA) Rating

**Health:** 2  
**Flammability:** 0  
**Reactivity:** 0  
**Special Hazard:**



## Safety Data Sheet

### 16.4. Document Revision

**Last Revision Date:** 5/1/2015

### DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.