

Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Boric Acid, 4% (w/v), with Bromocresol Green-Methyl Red Indicator for Kjeldahl Nitrogen Analysis

Product Number: 1070

Other Identifying Product Numbers: 1070-1, 1070-2.5, 1070-32, 1070-5

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 |
|--|------------|------------------|---|
| Reproductive Toxicity | Category 1 | H360 | 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 |
| Specific Target Organs/Systemic Toxicity Following Repeated Exposure | Category 1 | H372 | P260, P264, P270, P314, P501 |

2.2. GHS Label Elements

Pictograms:



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Signal Word: **Danger**

Hazard Statements:

| Hazard Number | Hazard Statement |
|---------------|---|
| H360 | May damage fertility or the unborn child. |
| H370 | Causes damage to organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |

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. |
| P260 | Do not breathe dust, fumes or mist. |
| P264 | Wash arms, hands and face thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P280 | Wear protective gloves and eye protection. |
| P307+P311 | IF exposed: Call a POISON CENTER or physician. |
| P308+P313 | IF exposed or concerned: Get medical attention. |
| P314 | Get medical attention if you feel unwell. |
| P321 | Specific treatment (Wash areas of contact with water). |
| P405 | Store locked up. |
| 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.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

| Chemical Name | Formula | Molecular Weight | CAS Number | Weight% |
|--------------------------------|--|------------------|------------|---------|
| Water | H ₂ O | 18.01 g/mol | 7732-18-5 | 96.06% |
| Boric Acid | H ₃ BO ₃ | 61.83 g/mol | 10043-35-3 | 3.94% |
| Bromocresol Green, Sodium Salt | C ₂₁ H ₁₃ Br ₄ O ₅ SNa | 705.96 g/mol | 62625-32-5 | 0.00% |
| Methyl Red, Sodium Salt | C ₁₅ H ₁₄ N ₃ NaO ₂ | 291.28 g/mol | 845-10-3 | 0.00% |



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SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause slight irritation.

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

Skin Contact: May cause slight irritation.

Ingestion: Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Does not present any significant health hazards. Wash areas of contact with water. EYE CONTACT: May cause slight irritation. SKIN CONTACT: May cause slight irritation.

4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water).

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.

6.2. Cleanup and Containment Methods and Materials

Dilute with water, then flush to sewer if local regulations allow. If not allowed, save for recovery or recycling in an approved waste disposal facility. Always dispose of in accordance with local, state and federal regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.



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SECTION 8: Exposure Controls / Personal Protection

8.1. Control Parameters

| Chemical Name | Limit Type | Country | Exposure Limit | Information Source |
|-------------------------|------------|---------|---|--|
| Boric Acid (10043-35-3) | TLV-STEL | USA | 6 mg/m ³ STEL (inhalable fraction, listed under Borate compounds, inorganic) | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Boric Acid (10043-35-3) | TLV-STEL | USA | 6 mg/m ³ STEL (inhalable fraction) | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Boric Acid (10043-35-3) | TLV-TWA | USA | 2 mg/m ³ TWA (inhalable fraction) | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Boric Acid (10043-35-3) | TLV-TWA | USA | 2 mg/m ³ TWA (inhalable fraction, listed under Borate compounds, inorganic) | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |

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.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Red-orange liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: 4.5 - 5

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: 1.02

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

Alkalies, Hydroxides

10.4. Hazardous Decomposition Products

Will not occur.



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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: (Boric Acid) 2660 mg/kg; LdLo, Oral, Woman: 200 mg/kg (Boric Acid). No information found on Methyl Red Sodium Salt or Bromocresol Green Sodium Salt in RTECS.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

May damage 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.

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). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. 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. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.



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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.

SECTION 14: Transportation Information

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

Not regulated according to DOT Regulations.

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.



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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

Not listed.

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

Not listed.

15.5. Massachusetts Right-to-Know Substance List

Not listed.

15.6. Pennsylvania Right-to-Know Hazardous Substances

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

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

Not listed.

15.8. California Proposition 65

Not listed.

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

Boric Acid (CAS # 10043-35-3): Present

Bromocresol Green, Sodium Salt (CAS # 62625-32-5): Present

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

Methyl Red, Sodium Salt (CAS # 845-10-3): Present

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

Boric Acid (CAS # 10043-35-3): Present

Bromocresol Green, Sodium Salt (CAS # 62625-32-5): Present

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

Methyl Red, Sodium Salt (CAS # 845-10-3): Present

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

Not listed.

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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Wear protective gloves and eye protector

IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water).

Store locked up.

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

16.2. Miscellaneous Hazard Classes

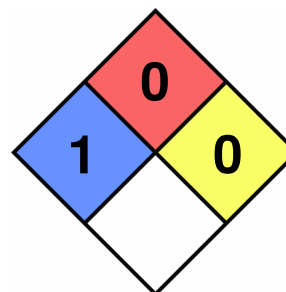
Canadian Carcinogenicity Hazard Class: Not Applicable.

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: 1
Flammability: 0
Reactivity: 0
Special Hazard:



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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.