



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Boric Acid, 2% (w/v) with Mixed Indicator
for Ammonia and Kjeldahl Nitrogen Analysis

Product Number 1064

Other Identifying Product Numbers 1064-1, 1064-16, 1064-2.5, 1064-32, 1064-5

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 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Flammable Liquids	Category 4	H227	P210,P280,P370+P378,P403,P501
Reproductive Toxicity	Category 1B	H360	P201,P202,P280,P308+P313,P405, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H227	Combustible liquid
H360	May damage fertility or the unborn child

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P308+P313	If exposed or concerned: Get medical advice or attention.
P370+P378	In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish.

Storage

Precautionary Number	Precautionary Statement
P403	Store in a well-ventilated place.
P405	Store locked up.

Disposal

Precautionary Number	Precautionary Statement
P501	Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

3.5 percent of this mixture consists of ingredient(s) of unknown acute dermal toxicity. 2 percent of this mixture consists of ingredient(s) of unknown acute inhalation toxicity.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	96.45
boric acid	Boric Acid; orthoboric acid; boracic acid	10043-35-3	1.99
ethanol	Ethyl Alcohol	64-17-5	1.49
methanol	Methyl Alcohol	67-56-1	< 0.1
[7-(dimethylamino)phenothiazin-3-ylidene]-dimethylazanium chloride trihydrate	Methylene Blue Trihydrate	7220-79-3	< 0.1
sodium 2-[[4-(dimethylamino)phenyl]diazenyl]benzoate	Methyl Red, Sodium Salt	845-10-3	< 0.1

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: May cause slight irritation.

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

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

Skin Contact: May cause slight irritation.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May damage fertility or the unborn child Non-flammable, non-corrosive. 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. Immediate Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish. Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Combustible liquid Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment and Precautions for Firefighters

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

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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

Absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

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

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

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U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Ethyl Alcohol	64-17-5	1000 ppm TWA; 1900 mg/m ³ TWA
Methyl Alcohol	67-56-1	200 ppm TWA; 260 mg/m ³ TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Boric Acid	10043-35-3	6 mg/m ³ STEL (inhalable particulate matter, listed under Borate compounds, inorganic)
Ethyl Alcohol	64-17-5	1000 ppm STEL
Methyl Alcohol	67-56-1	250 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Boric Acid	10043-35-3	2 mg/m ³ TWA (inhalable particulate matter, listed under Borate compounds, inorganic)
Methyl Alcohol	67-56-1	200 ppm TWA

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	liquid
Color:	Dark blue
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	Approximately 0°C
Boiling Point/Range:	Approximately 100°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	81 °C (calculated)
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	4.5 - 5
Kinematic Viscosity:	Data not available.
Solubility:	miscible
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	1.01
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	Data not available.

NOTE: Flash point was calculated according to the method of Gmehling and Rasmussen (Ind. Eng. Chem. Fundament, 21, 186, (1982)), as allowed by GHS Rev 7, section 2.6.4.2.3.

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 away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 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 acutely toxic.

Chemical Name	CAS Number	Toxicity
Boric Acid	10043-35-3	Oral LD50 Rat 2660 mg/kg (Source: JAPAN_GHS)
Ethyl Alcohol	64-17-5	Oral LD50 Rat 7060 mg/kg (Source: NLM_CIP)
Methyl Alcohol	67-56-1	Oral LD50 Acute Toxicity Estimate 100 mg/kg (Source: ECHA)
Methylene Blue Trihydrate	7220-79-3	Oral LD50 Rat 1180 mg/kg (Source: NLM_CIP) As Methylene Blue [61-73-4]

Acute Toxicity - Dermal Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Methyl Alcohol	67-56-1	Dermal LD50 Acute Toxicity Estimate 300 mg/kg (Source: ECHA)

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 4285.7143 mg/L, 4 h(calculated)

Chemical Name	CAS Number	Toxicity
Ethyl Alcohol	64-17-5	Inhalation LC50 Rat 116.9 mg/L 4 h (males, vapor, Source: ECHA_API); Inhalation LC50 Rat 133.8 mg/L 4 h (females, vapor, Source: ECHA_API)
Methyl Alcohol	67-56-1	Inhalation LC50 Acute Toxicity Estimate 3 mg/L 4 h (Source: ECHA)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
Methylene Blue Trihydrate	7220-79-3	Group 3 (Not Classified) - Monograph 108 [2016] (listed under Methylene blue)

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
Boric Acid	10043-35-3	Male Rat - Not Tested; Female Rat - Not Tested; Male Mice - No Evidence; Female Mice - No Evidence (TR-324)
Ethyl Alcohol	64-17-5	Male Rat - Not Tested; Female Rat - Not Tested; Male Mice - Inadequate Experiment; Female Mice - Inadequate Experiment (TR-510)
Methylene Blue Trihydrate	7220-79-3	Male Rat - Some Evidence; Female Rat - No Evidence; Male Mice - Some Evidence; Female Mice - Equivocal Evidence (TR-540)

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U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
No data found.		

11.3 Additional Toxicology Information:

May damage fertility or the unborn child.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Boric Acid	10043-35-3	Avian	Dietary	LC50 5 Days Anas platyrhynchos >5620 ppm [Diet] (IUCLID); LC50 5 Days Colinus virginianus >5620 ppm [Diet] (IUCLID)
Ethyl Alcohol	64-17-5	Earthworm	Acute	LC50 48 h Eisenia foetida 0.1 - 1 mg/cm2 [filter paper] (IUCLID)
Methyl Alcohol	67-56-1	Earthworm	Acute	LC50 48 h Eisenia foetida >1 mg/cm2 [filter paper] (IUCLID)
Ethyl Alcohol	64-17-5	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss 12.0 - 16.0 mL/L [static] (EPA); LC50 96 h Pimephales promelas >100 mg/L [static] (EPA); LC50 96 h Pimephales promelas 13400 - 15100 mg/L [flow-through] (EPA)
Methyl Alcohol	67-56-1	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 28200 mg/L [flow-through] (EPA); LC50 96 h Pimephales promelas >100 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static] (EPA); LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through] (EPA)
Boric Acid	10043-35-3	Water Flea	Acute	EC50 48 h Daphnia magna 115 - 153 mg/L (EPA)
Ethyl Alcohol	64-17-5	Water Flea	Acute	LC50 48 h Daphnia magna 9268 - 14221 mg/L (IUCLID); EC50 48 h Daphnia magna 2 mg/L [Static] (EPA)

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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.



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

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG regulations.

SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
No data found.		

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

Chemical Name	CAS Number	RQ
No data found.		

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

Chemical Name	CAS Number	Regulatory Information
Methyl Alcohol	67-56-1	5000 lb final RQ; 2270 kg final RQ

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Methyl Alcohol	67-56-1	Emission Reporting	1.0 % de minimis concentration

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Ethyl Alcohol	64-17-5	Teratogen
Methyl Alcohol	67-56-1	Present

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Ethyl Alcohol	64-17-5	Present
Methyl Alcohol	67-56-1	Environmental hazard

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

Chemical Name	CAS Number	Regulatory Information
Boric Acid	10043-35-3	"sn 0241" As Borate compounds, inorganic [RR-33876-1]
Ethyl Alcohol	64-17-5	sn 0844
Methyl Alcohol	67-56-1	sn 1222

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15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Ethyl Alcohol	64-17-5	"carcinogen, 7/1/1988 (when associated with alcohol abuse); carcinogen, 4/29/2011" As Alcoholic beverages [RR-01961-4]
Ethyl Alcohol	64-17-5	"developmental toxicity, 10/1/1987 (listed under Ethyl alcohol in alcoholic beverages)" As Alcoholic beverages [RR-01961-4]
Methyl Alcohol	67-56-1	developmental toxicity, 3/16/2012

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

Chemical Name	CAS Number	List	Status
Boric Acid	10043-35-3	DSL	Present
Ethyl Alcohol	64-17-5	DSL	Present
Ethyl Alcohol	64-17-5	NDSL	"Present" As Alcohols, C1-3 [68475-56-9]
Methyl Alcohol	67-56-1	DSL	Present
Methyl Alcohol	67-56-1	NDSL	"Present" As Alcohols, C1-3 [68475-56-9]
Methylene Blue Trihydrate	7220-79-3	DSL	"Present" As Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride [61-73-4]
Water	7732-18-5	DSL	Present
Methyl Red, Sodium Salt	845-10-3	DSL	Present

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

Chemical Name	CAS Number	Status
Boric Acid	10043-35-3	Present (ACTIVE)
Ethyl Alcohol	64-17-5	Present (ACTIVE)
Methyl Alcohol	67-56-1	Present (ACTIVE)
Methylene Blue Trihydrate	7220-79-3	"Present (ACTIVE)" As Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (1:1) [61-73-4]
Water	7732-18-5	Present [XU] (ACTIVE)
Methyl Red, Sodium Salt	845-10-3	Present (ACTIVE)

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

Chemical Name	CAS Number	List	Number
Boric Acid	10043-35-3	EINECS	233-139-2
Ethyl Alcohol	64-17-5	EINECS	200-578-6
Methyl Alcohol	67-56-1	EINECS	200-659-6
Methylene Blue Trihydrate	7220-79-3	EINECS	"200-515-2" As Methylthioninium chloride [61-73-4]
Water	7732-18-5	EINECS	231-791-2
Methyl Red, Sodium Salt	845-10-3	EINECS	212-682-9

15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Boric Acid	10043-35-3	Present [25550]
Ethyl Alcohol	64-17-5	Present [38125]
Methyl Alcohol	67-56-1	Present [16735]
Methylene Blue Trihydrate	7220-79-3	"Present [20899]" As Basic turquoise BB [61-73-4]
Water	7732-18-5	Present [32224]
Methyl Red, Sodium Salt	845-10-3	Present [08084]

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Boric Acid	10043-35-3	Annex 1	Present [KE-03499]
Ethyl Alcohol	64-17-5	Annex 1	Present [KE-13217]
Methyl Alcohol	67-56-1	Annex 1	Present [KE-23193]
Methylene Blue Trihydrate	7220-79-3	Annex 1	"Present [KE-06942]" As Methylene Blue [61-73-4]
Water	7732-18-5	Annex 1	Present [KE-35400]
Methyl Red, Sodium Salt	845-10-3	Annex 1	Present [KE-11175]

15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Boric Acid	10043-35-3	(1)-63
Ethyl Alcohol	64-17-5	(2)-202
Methyl Alcohol	67-56-1	(2)-201
Methylene Blue Trihydrate	7220-79-3	"(5)-1995" As 3,7-Bis(N,N-dimethylamino)phenothiazin-5-ium chloride [61-73-4]
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)

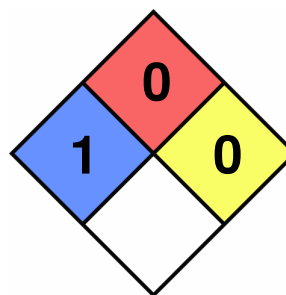
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SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 1
Flammability: 0
Reactivity: 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
2026-05-23

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.