

SECTION 1: Identification

Product identifier	
Product name	Boron 2 – Reagent A
Product number	R-8018A
Recommended use and restrictions	Water analysis. To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer	Taylor Technologies, Inc. 31 Loveton Circle Sparks, MD 21152 Local: (410) 472-4340 – 8am – 5pm EST Toll-free: (800) 837-8548 – 8am – 5pm EST
Emergency phone number	
CHEMTREC, United States	1-800-424-9300 – 24-hour service
CHEMTREC, International	+1 703-741-5970 – 24-hour service

SECTION 2: Hazard(s) Identification

Physical hazards	Not applicable
Health hazards	Eye damage/irritation Category 2A
Environmental hazards	Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.
Label elements	
Hazard pictograms	
Signal word	Warning
Hazard statements	Causes serious eye irritation.
Precautionary statements	
Prevention	Wash skin thoroughly after handling. Wear eye protection/face protection if contact is likely to occur.
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. IF EYE IRRITATION PERSISTS: Get medical advice/attention.
Storage	Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards not otherwise classified	Not applicable

SECTION 3: Composition/Information on Ingredients

Mixture			
Chemical name	Common name and synonyms	CAS number	% w/w
Water	Dihydrogen oxide	7732-18-5	45-70
Ammonium acetate	Acetic acid ammonium salt	631-61-8	30-40
Acetic acid	Glacial acetic acid	64-19-7	1-5
Ammonium sulfate	Diammonium sulfate	7783-20-2	1-5
EDTA tetrasodium salt	Ethylenediaminetetraacetic acid tetrasodium salt hydrate	10378-23-1	1-5

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First-Aid Measures

If inhaled

Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed

Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Direct skin or eye contact may cause irritation. Symptoms may include redness or itching. Tearing of the eyes or blurred vision may occur. Inhalation may cause respiratory irritation, such as coughing. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Refer to section 11 of the SDS for delayed and immediate effects and chronic effects from short- and long-term exposure.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting Measures

Extinguishing media

Suitable extinguishing media Use extinguishing media appropriate for the surrounding fire.

Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard Not flammable

Explosion hazard Not explosive

Reactivity Hazardous reactions will not occur under normal conditions.

Hazardous combustion products Carbon oxides, nitrogen oxides, sodium oxides, sulfur oxides. During fire, gases hazardous to health may be formed.

Advice for firefighters

Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.

Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.

Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.

Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of large spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and Storage

Precautions for safe handling

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure.

Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure Controls/Personal Protection**Occupational exposure limits****US ACGIH Threshold Limit Values**

<u>Components</u>	<u>Type</u>	<u>Value</u>
Acetic acid (CAS 64-19-7)	STEL	37 mg/m ³
	TWA	25 mg/m ³

US NIOSH: Pocket Guide to Chemical Hazards

<u>Components</u>	<u>Type</u>	<u>Value</u>
Acetic acid (CAS 64-19-7)	STEL	37 mg/m ³
	TWA	25 mg/m ³

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<u>Components</u>	<u>Type</u>	<u>Value</u>
Acetic acid (CAS 64-19-7)	TWA	25 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure controls

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Eye/face protection Wear appropriate safety glasses with side shields (or goggles) if contact is likely to occur.
 Skin protection Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
 Body protection Wear appropriate protective clothing if contact is likely to occur
 Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state	Liquid
Form	Liquid
Color	Clear, colorless
Odor	Vinegar-like
Odor threshold	No data available
pH	5.5
Evaporation rate	No data available
Melting point	No data available
Freezing point	No data available
Initial boiling point (boiling range)	212°F (100°C)
Flash point	Not applicable
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Upper Flammability Limit	No data available
Lower Flammability Limit	No data available
Vapor pressure	No data available
Vapor density	No data available

Relative density	No data available
Solubility	Miscible
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

SECTION 10: Stability and Reactivity

Reactivity	Hazardous reactions will not occur under normal conditions of use, storage, and transport.
Chemical stability	Stable under recommended handling and storage conditions (refer to section 7 of the SDS).
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Ammonia.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Direct contact with skin may cause temporary irritation.
Eye contact	Direct contact with eyes may cause serious irritation. Avoid close eye contact; Use caution to avoid splashes. Wear eye protection.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical, and toxicological characteristics Causes serious eye irritation. Refer to section 4 of the SDS for most important symptoms and effects.

Delayed and immediate effects and chronic effects from short- and long-term exposure

Acute toxicity This product is not classified as an acute toxicity hazard. Acute toxicity estimate (ATE) has been calculated based on chapter 3 of GHS.

Product acute toxicity estimate (ATE)

ATEmix (Oral)	> 2000 mg/kg
ATEmix (Dermal)	No data available
ATEmix (Inhalation)	No data available

Component(s)	Species	Acute toxicity data
Acetic acid (CAS 64-19-7)		
LD50 (Oral)	Rat	3310 mg/kg (source: NIOSH)
LD50 (Dermal)	Not applicable	No data available
LC50 (Inhalation)	Not applicable	No data available
Ammonium sulfate (CAS 7783-20-2)		
LD50 (Oral)	Rat	2840 mg/kg (source: NIOSH)
LD50 (Dermal)	Not applicable	No data available
LC50 (Inhalation)	Not applicable	No data available
EDTA tetrasodium salt dihydrate (CAS 10378-23-1)		
LD50 (Oral)	Rat	630-1260 mg/kg (source: vendor)
LD50 (Dermal)	Not applicable	No data available
LC50 (Inhalation)	Not applicable	No data available
Skin corrosion/irritation	No data available	
Serious eye damage/eye irritation	Causes serious eye irritation	
Respiratory sensitization	No data available	
Skin sensitization	No data available	

Germ cell mutagenicity No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens

Not listed

Reproductive toxicity No data available

Specific target organ toxicity (single exposure) No data available

Specific target organ toxicity (repeated exposure) No data available

Aspiration hazard No data available

SECTION 12: Ecological Information

Ecotoxicity This product is not classified as environmentally hazardous.

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Other adverse effects Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal Considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport Information

DOT Not regulated as dangerous goods

IATA Not regulated as dangerous goods

IMDG Not regulated as dangerous goods

SECTION 15: Regulatory Information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

<u>Chemical name</u>	<u>CAS number</u>	<u>Reportable Quantity</u>
Acetic acid	64-19-7	5000 lbs
Ammonium acetate	631-61-8	5000 lbs

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

SARA 311/312 Hazardous Chemical

<u>Chemical name</u>	<u>CAS number</u>
Acetic acid	64-19-7
Ammonium sulfate	7783-20-2
EDTA tetrasodium salt	10378-23-1

SARA 313 (TRI reporting)

Not regulated

TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130)

Not regulated

Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Massachusetts Right-to-Know Act

<u>Chemical name</u>	<u>CAS number</u>
Acetic acid	64-19-7
Ammonium acetate	631-61-8
Ammonium sulfate	7783-20-2

New Jersey Worker and Community Right-to-Know Act

<u>Chemical name</u>	<u>CAS number</u>
Acetic acid	64-19-7
Ammonium acetate	631-61-8

Pennsylvania Worker and Community Right-to-Know Act

<u>Chemical name</u>	<u>CAS number</u>
Acetic acid	64-19-7
Ammonium acetate	631-61-8
Ammonium sulfate	7783-20-2

Rhode Island Right-to-Know Act

<u>Chemical name</u>	<u>CAS number</u>
Acetic acid	64-19-7

SECTION 16: Other Information

NFPA Rating

Health hazard	2
Fire hazard	0
Reactivity	0
Specific	N/A

Disclaimer

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This document embodies significant change(s) that may impact classification, safe handling, or health information for the associated product(s). The information contained herein should be reviewed in its entirety before handling material.