

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Markey Boron 10%

1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

MarVista Resources
 745 North Ave.
 Corcoran, Ca. 93212 - USA
 T 559-992-4535

1.4. Emergency telephone number

Emergency number : 24 Hour Emergency Response Chemtrec: 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flammable liquids Category 4 H227
 Skin corrosion/irritation Category 1A H314
 Reproductive toxicity Category 1B H360

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

GHS08

Signal word (GHS-US) : Danger

Contains : boric acid; 2-aminoethanol

Hazard statements (GHS-US) : H227 - Combustible liquid
 H314 - Causes severe skin burns and eye damage
 H360 - May damage fertility or the unborn child

Precautionary statements (GHS-US) : 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. - No smoking
 P260 - Do not breathe the mist, spray
 P264 - Wash hands, forearms and face thoroughly after handling
 P280 - Wear protective gloves, eye protection, face protection
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P308+P313 - If exposed or concerned: Get medical advice/attention
 P310 - Immediately call a doctor
 P321 - Specific treatment (see the first aid section on this label)
 P363 - Wash contaminated clothing before reuse
 P370+P378 - In case of fire: Use dry sand, dry extinguishing powder, foam to extinguish
 P403+P235 - Store in a well-ventilated place. Keep cool
 P405 - Store locked up
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

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2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
boric acid	(CAS No) 10043-35-3	56-58	Repr. 1B, H360
2-aminoethanol	(CAS No) 141-43-5	17-20	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1A, H314

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact : Burns.
- Symptoms/injuries after eye contact : Serious damage to eyes.
- Symptoms/injuries after ingestion : Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : NO open flames, NO sparks, and NO smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe gas/fumes/vapor/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection " ".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8 : Exposure-controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe mist, spray.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

boric acid (10043-35-3)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
ACGIH	ACGIH STEL (mg/m ³)	6 mg/m ³
2-aminoethanol (141-43-5)		
ACGIH	ACGIH TWA (ppm)	3 ppm
ACGIH	ACGIH STEL (ppm)	6 ppm
ACGIH	Remark (ACGIH)	Eye & skin irr
OSHA	OSHA PEL (TWA) (mg/m ³)	6 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	3 ppm

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Protective gloves.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear respiratory protection.
- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Black.
- Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.
Mixture contains one or more component(s) which have the following odour(s):
Odourless Unpleasant odour Ammonia odour Smell of fish
- Odor threshold : No data available
- pH : 7.8 - 8.4
- Melting point : Not applicable
- Freezing point : No data available
- Boiling point : > 100 °C
- Flash point : No data available

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Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 1.34 g/ml
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, No sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

10% Boron	
LD50 oral rat	> 2000 mg/kg Estimated based on components
boric acid (10043-35-3)	
LD50 oral rat	2660 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; >2600 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg Rabbit; Experimental value; FIFRA (40 CFR)
ATE US (oral)	2660.000 mg/kg body weight
2-aminoethanol (141-43-5)	
LD50 oral rat	1720 mg/kg (Rat)
LD50 dermal rabbit	1018 mg/kg (Rabbit)
ATE US (oral)	1720.000 mg/kg body weight
ATE US (dermal)	1018.000 mg/kg body weight
ATE US (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: 8.7 (6.5 - 9)

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Serious eye damage/irritation	: Not classified pH: 7.8 - 8.4
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after skin contact	: Burns.
Symptoms/injuries after eye contact	: Serious damage to eyes.
Symptoms/injuries after ingestion	: Burns.

SECTION 12: Ecological information

12.1. Toxicity

boric acid (10043-35-3)	
LC50 fish 1	100 ppm (96 h; Salmo gairdneri (Oncorhynchus mykiss); Soft water)
EC50 Daphnia 1	658 - 875 mg/l (48 h; Daphnia magna)
LC50 fish 2	79 ppm (96 h; Salmo gairdneri (Oncorhynchus mykiss); Hard water)
EC50 Daphnia 2	19.7 mg/l (336 h; Daphnia magna)
TLM fish 1	1800 ppm (24 h; Gambusia affinis)
Threshold limit algae 1	5 mg/l (672 h; Elodea sp.)
Threshold limit algae 2	0.4 - 0.8,336 h; Chlorella sp.; Growth
2-aminoethanol (141-43-5)	
LC50 fish 1	150 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	140 mg/l (24 h; Daphnia magna)
LC50 fish 2	329.16 mg/l (96 h; Lepomis macrochirus)
TLM fish 1	100 - 1000,96 h; Pisces
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit algae 1	0.97 mg/l (192 h; Scenedesmus quadricauda; Inhibitory)
Threshold limit algae 2	35 mg/l (72 h; Algae)

12.2. Persistence and degradability

boric acid (10043-35-3)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
2-aminoethanol (141-43-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.80 g O ₂ /g substance
Chemical oxygen demand (COD)	1.34 g O ₂ /g substance
ThOD	2.49 g O ₂ /g substance
BOD (% of ThOD)	0.32 % ThOD

12.3. Bioaccumulative potential

boric acid (10043-35-3)	
BCF fish 1	0 (Salmo gairdneri (Oncorhynchus mykiss); Chronic)

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boric acid (10043-35-3)	
BCF fish 2	< 0.1 (60 days; Oncorhynchus tshawytscha; Fresh weight)
Log Pow	-1.09 (Experimental value; EU Method A.8: Partition Coefficient; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2-aminoethanol (141-43-5)	
Log Pow	-1.91
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

boric acid (10043-35-3)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

2-aminoethanol (141-43-5)	
Surface tension	0.050 N/m

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated for transport

TDG

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

10% Boron
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

boric acid (10043-35-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-aminoethanol (141-43-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

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2-aminoethanol (141-43-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Full text of H-phrases:

H227	Combustible liquid
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled
H360	May damage fertility or the unborn child

NFPA health hazard

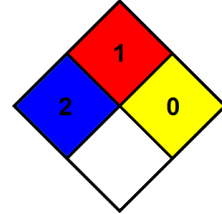
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

All information contained in this Safety Data Sheet is furnished free of charge and is intended for your evaluation. In our opinion the information is, as of the date of this Safety Data Sheet, reliable, however, it is your responsibility to determine the suitability of the information for your use. You are advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional or variable conditions or circumstances exist or because of applicable laws or government regulations. Therefore, you should use this information only as a supplement to other informations gathered by you, and you must make independent determinations of the suitability and completeness of the information from all sources to assure both proper use of the material described herein and the safety and health of employees. Accordingly, no guarantee is expressed or implied as to the results to be obtained based upon your use of the information.