

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier**Product Name** CGB10**Other means of identification****Product Description** 10 000 µg/mL Boron**Recommended use of the chemical and restrictions on use****Recommended Use** Laboratory chemicals.**Uses advised against** No information available**Details of the supplier of the safety data sheet****Company**Inorganic Ventures
300 Technology Drive
Christiansburg, VA 24073
web: www.inorganicventures.com**Emergency telephone number****Emergency Telephone Number**Chemtrec 1-800-424-9300 (North America)
Chemtrec +1 703-741-5970 (International)

2. HAZARDS IDENTIFICATION

GHS**Classification**

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B

Label Elements**Danger****Hazard statements**Causes skin irritation
Causes serious eye irritation
May cause cancer
May damage fertility or the unborn child

Appearance clear / colorless	Physical state Liquid	Odor Pungent
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Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection

Precautionary Statements - Response**Eyes**

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

Skin

IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

- Harmful to aquatic life

Other Information

5.6 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Boric acid (H ₃ BO ₃)	10043-35-3	5.6
Ammonium hydroxide	1336-21-6	1.5

4. FIRST AID MEASURES**Description of first aid measures****General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. If symptoms persist, call a physician.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion

Immediate medical attention is required. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Decomposition by contact with water may generate vapors which can be ignited by heat or open flame.

Special Exposure Hazards Arising from the Substance/Mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Cleaning up Dam up. Neutralise with lime milk; soda. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Wear personal protective equipment. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Boric acid (H3BO3) 10043-35-3	6 mg/m ³ STEL (inhalable particulate matter, listed under Borate compounds, inorganic) 6 mg/m ³ STEL (inhalable particulate matter) TWA: 2 mg/m ³		
Ammonium hydroxide 1336-21-6	35 ppm STEL TWA: 25 ppm	TWA: 50 ppm TWA: 35 mg/m ³ (vacated) STEL: 35 ppm (vacated) STEL: 27 mg/m ³	IDLH: 300 ppm TWA: 25 ppm TWA: 18 mg/m ³ STEL: 35 ppm STEL: 27 mg/m ³

Appropriate engineering controls**Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye Protection	Tightly fitting safety goggles
Skin and Body Protection	Impervious clothing Boots Chemical resistant apron
Hand Protection	Impervious gloves
Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	clear / colorless
Odor	Pungent
Property	Values
pH - VALUE 1	No data available
Melting point / melting range	No data available
Boiling point / boiling range	100 °C / 212 °F
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapor pressure @20 °C (kPa)	No data available
Vapor density	No data available
Relative Density	No data available
Specific gravity - VALUE 1	No data available
Water solubility	Miscible
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity - VALUE 1	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other information

VOC Content (%)

No information available

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

None known.

Incompatible materials

No information available

Hazardous decomposition products

No information available.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information**

Contains a known or suspected reproductive toxin May impair fertility May cause harm to the unborn child

Inhalation

No data available.

Eye Contact

No data available.

Skin Contact

No data available.

Ingestion

Harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Boric acid (H3BO3) - 10043-35-3	= 2660 mg/kg (Rat) = 3765 mg/kg (Rat)	> 2000 mg/kg (Rabbit) >= 2000 mg/kg (Rabbit)	> 0.16 mg/L (Rat) 4 h >= 2120 mg/m ³ (Rat) 4 h
Ammonium hydroxide - 1336-21-6	= 350 mg/kg (Rat)	-	= 2000 ppm (Rat) 4 h

Information on toxicological effects**Symptoms**

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

No information available.

Mutagenic Effects

No information available.

Carcinogenic effects

Chemical name	ACGIH	IARC	NTP	OSHA
Boric acid (H3BO3) 10043-35-3				X

Reproductive Toxicity

Contains a known or suspected reproductive toxin. May impair fertility. May cause harm to the unborn child.

Developmental Toxicity

May cause harm to the unborn child.

STOT - single exposure No information available.
 STOT - repeated exposure No information available.
 Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 5.6 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 23333 mg/kg
 ATEmix (dermal) 35750 mg/kg mg/l
 ATEmix (inhalation-dust/mist) 33.4 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects

Contains 0 % of components with unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Boric acid (H3BO3) 10043-35-3		1020: 72 h Carassius auratus mg/L LC50 flow-through		EC50 48 h 115 - 153 mg/L (Daphnia magna)
Ammonium hydroxide 1336-21-6		8.2: 96 h Pimephales promelas mg/L LC50 0.26 - 4.6: 96 h Lepomis macrochirus mg/L LC50 1.5: 96 h Poecilia reticulata mg/L LC50 1.19: 96 h Poecilia reticulata mg/L LC50 static 0.73 - 2.35: 96 h Pimephales promelas mg/L LC50 5.9: 96 h Pimephales promelas mg/L LC50 static 0.44: 96 h Cyprinus carpio mg/L LC50 1.17: 96 h Lepomis macrochirus mg/L LC50 flow-through		EC50 48 h = 0.66 mg/L (water flea) EC50 48 h = 0.66 mg/L (Daphnia pulex) LC50 48 h = 25.4 mg/L (Daphnia magna)

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Chemical name	Partition coefficient
Boric acid (H3BO3) 10043-35-3	-0.757
Ammonium hydroxide 1336-21-6	-1.14

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products Dispose of in accordance with federal, state and local regulations

Contaminated Packaging Do not reuse empty containers.

Chemical name	California Hazardous Waste Status
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Boric acid (H3BO3) 10043-35-3	Toxic
Ammonium hydroxide 1336-21-6	Toxic Corrosive

14. TRANSPORT INFORMATION

IMDG

14.1. UN-No Not regulated
 14.2. Proper shipping name Not regulated
 14.3. Transport hazard class(es) Not regulated
 14.4. Packing Group Not regulated
 Description Not applicable
 14.5. Marine Pollutant None
 14.6. Special Provisions None
 No information available Transport No information available
 in bulk according
 to Annex II of MARPOL 73/78 and
 the IBC Code

RID

14.1. UN-No Not regulated
 14.2. Proper shipping name Not regulated
 14.3. Hazard Class Not regulated
 14.4. Packing Group Not regulated
 Description Not applicable
 14.5. Environmental hazard None
 14.6. Special Provisions None

ADR

14.1. UN-No Not regulated
 14.2. Proper shipping name Not regulated
 14.3. Hazard Class Not regulated
 14.4. Packing Group Not regulated
 Description Not applicable
 14.5. Environmental hazard None
 14.6. Special Provisions None

ICAO

14.1. UN-No Not regulated
 14.2. Proper Shipping Name Not regulated
 14.3. Hazard Class Not regulated
 14.4. Packing Group Not regulated
 Description Not applicable
 14.5. Environmental hazard None
 14.6. Special Provisions None

IATA-DGR

14.1. UN-No Not regulated
 14.2. Proper shipping name Not regulated
 14.3. Transport hazard class(es) Not regulated
 14.4. Packing Group Not regulated
 Description Not applicable
 14.5. Environmental hazard None
 14.6. Special Provisions None

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL/NDL Complies

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ammonium hydroxide - 1336-21-6	1336-21-6	1.5	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Not classified
Chronic Health Hazard	Not classified
Fire hazard	Not classified
Sudden Release of Pressure Hazard	No
Reactive Hazard	Not classified

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium hydroxide 1336-21-6	1000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Ammonium hydroxide 1336-21-6	1000 lb 100 lb	100 lb	RQ 1000 lb final RQ RQ 454 kg final RQ RQ 100 lb final RQ RQ 45.4 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Boric acid (H3BO3) 10043-35-3	X		
Ammonium hydroxide 1336-21-6	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

Revision Date 03-Feb-2023

Revision Note

No information available

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS