Safety Data Sheet

Section 01 - Identification

Product Identifier	Boric Acid 99%
Other Means of Identification	Orthoboric acid, Boracic acid, Sassolite, Optibor, Borofax, Trihydroxyborane
Product Use and Restrictions on Use	Insecticide, pH buffer, welding flux, glass manufacture
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
24-Hour Emergency Phone	Phone: 1 (306) 664 – 2522

Section 02 - Hazard Identification

GHS-Classification

Reproductive Toxicity Category 1B

Physical Hazards

No known physical hazards.

Danger

Hazards Statements
H360 May damage fertility or the unborn child.

Pictograms

Precautionary Statements
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves with eye and face protection.
P308+P313 IF exposed or concerned: Get medical attention.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local regulatory requirements.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Boric Acid	10043-35-3	>99%	

Section 04 - First Aid Measures

Inhalation

If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical advice.

Skin Contact / Absorption

Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists. Wash clothing, shoes and leather goods before reuse.

Eye Contact

DO NOT allow victim to rub eye(s). Let the eye(s) water naturally for a few minutes. Have victim look right and left, and then up and down. If particle/dust does not dislodge, flush with lukewarm, gently flowing water for 30 minutes or until particle/dust is removed, while holding the eyelid(s) open. If irritation persists, immediately obtain medical attention. DO NOT attempt to manually remove anything stuck to the eye(s).

Ingestion

If irritation or discomfort occurs, obtain medical advice.

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media

Boric Acid does not burn and does not support combustion. Use extinguishing media suitable for surrounding fire. Boric Acid is used as a dry powder extinguishing agent suitable for all classes of fires.

Unsuitable Extinguishing Media

Not Available

Specific Hazards Arising From the Chemical

Oxides of Boron

Special Protective Equipment and Precautions for Fire-Fighters

Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

Further Information

Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures

Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Prevent material from entering sewers.

Environmental Precautions

Avoid contamination of bodies of water during cleanup.

Methods and Materials for Containment and Cleaning Up

Dry sweeping is not recommended. Pre-damping the material or use of a vacuum is preferred. Shovel into clean, dry, labelled containers and cover. Flush area with water.

Section 07 - Handling and Storage

Precautions for Safe Handling

Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

Conditions for Safe Storage	Store in suitable, labelled containers, preferably the supplier container. Protect contents from accidental contact with water. Protect from damage. Practice keeping storage containers closed when not in use and when empty.
Incompatibilities	None known

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Boric Acid	ACGIH	TWA	2 mg/m^3
	ACGIH	STEL	6 mg/m^3

Engineering Control(s)

Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face	Wear appropriate protective eyeglasses or chemical safety goggles.
Hand Protection	Wear chemically resistant gloves while handling this product
Skin and Body Protection	Dry product is generally non-irritating to intact skin. However, this product can be irritating where skin has been damaged and can create skin irritation after long exposures when moisture is present. Under such conditions, long-sleeved clothing is recommended to minimize skin contact. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	Always wear NIOSH approved respirator when handling this chemical
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Solid
Colour	White
Odour	Odourless
Odour Threshold	Not Applicable

Property

pH	3.8 – 4.8 (3% solution)
Melting Point/Freezing Point	169°C

Initial Boiling Point and Boiling Range	Not Available
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability	Non-Flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20ºC)	Not Applicable
Vapour Density (Air=1)	Not Applicable
Relative Density	Not Available
Solubility(ies)	Soluble in water
Partition Coefficient: n-octanol/water	Not Applicable
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	100°C
Viscosity	Not Applicable
Explosive Properties	Not Applicable
Specific Gravity (Water=1)	Not Available
% Volatiles by Volume	Not Available
Formula	H_3BO_3
Molecular Weight	61.83

Section 10 - Stability and Reactivity

Reactivity	Non-reactive
Stability	Moisture sensitive
Possibility of Hazardous Reactions	None known.
Conditions to Avoid	Excess heat, dust formation, exposure to moisture
Incompatible Materials	Strong oxidizing agents, strong bases
Hazardous Decomposition Products	Oxides of boron

Section 11 - Toxicological Information

Acute Toxicity

Component	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
Boric Acid	2660 mg/kg (rat)	>2000 mg/kg	Not Available

Chronic Toxicity – Carcinogenicity

Component	IARC
Boric Acid	Not known to cause cancer in humans or laboratory animals

Skin Corrosion/Irritation	Non-irritant to very mild skin irritant.
Ingestion	May cause nausea, vomiting and abdominal pain. May cause CNS effects such as dizziness and disorientation.
Inhalation	May cause shortness of breath. May cause CNS effects such as dizziness and disorientation.
Serious Eye Damage/Irritation	Very mild eye irritant.
Respiratory or Skin Sensitization	Skin irritation may be aggravated in persons with skin lesions.
Germ Cell Mutagenicity	Not known to be a mutagen.
Reproductive Toxicity	Boric acid is proven to cause birth defects in laboratory animals, and may cause harm to unborn child. Boric acid is suspected of causing reduced sperm count and viability in workers with long term chronic exposure.
STOT-Single Exposure	Not Available
STOT-Repeated Exposure	Not Available
Aspiration Hazard	Not Available
Synergistic Materials	Not Available

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Boric Acid	Not Available	LC50: Gambusia affinis 96hr 5600mg/L	EC50: Daphnia magna, 48hr, 115-153 mg/L

Biodegradability	Boric Acid does not readilly biodegrade
Bioaccumulation	Not Available
Mobility	Expected to be mobile
Other Adverse Effects	Not Available

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	Not Regulated
UN Proper Shipping Name	Not Regulated
Transport Hazard Class(es)	Not Regulated
Packaging Group	Not Regulated
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available

TDG

Other Secure containers (full and/or empty) with suitable hold down devises during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date 2017 July 7

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

1) CHEMINFO
2) eChemPortal
3) TOXNET
4) Transportation of Dangerous Goods Canada
5) HSDB
6) ECHA
7) PAN

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