Material Safety Data Sheet
Boric Acid MSDS

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Boric Acid

CAS#: 10043-35-3

Synonyms: Boracic acid, Orthoboric acid, Hydrogen Borate

Company Identification:
PPEC Ltd, Sheepmarsh Lane, North Cotes Lincolnshire, DN36 5UU

For information call: 07741 161471 | 01472 389 545

Emergency Number: 07741 161471

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Component	CAS-No	Weight%
Boric Acid (H3B03	10043-35-3	>95

SECTION 3: HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/irritation - Category 3
Serious Eye Damage/Eye Irritation - Category 2
Reproductive Toxicity - Category 1B
Specific target organ toxicity (single exposure) - Category 3
Target Organs - Central nervous system (CNS).
Specific target organ toxicity - (repeated exposure) - Category 2
Target Organs - Kidney, Liver, Blood.

Label Elements

Signal Word: Danger
Hazard Statements
Causes mild skin irritation
Causes eye irritation
May damage fertility. May damage the unborn child
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure

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
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Response
IF exposed or concerned: Get medical attention/advice
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
None identified

SECTION 4: FIRST AID MEASURES

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Get medical attention immediately if symptoms occur.

Ingestion
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects
No information available.

Notes to Physician: Treat symptomatically

SECTION 5: FIRE AND EXPLOSION DATA

Suitable Extinguishing Media: Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media : No information available

Flash Point: No information available
Method: No information available

Autoignition Temperature: Not applicable
Explosion Limits
Upper - No data available
Lower - No data available
Sensitivity to Mechanical Impact - No information available
Sensitivity to Static Discharge - No information available

Specific Hazards Arising from the Chemical
Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Hazardous Combustion Products
Oxides of boron

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.

NFPA

Health	Flammability	Instability	Physical Hazards
2	0	1	N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Environmental Precautions
Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

SECTION 7: HANDLING AND STORAGE

Handling
Wear personal protective equipment. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest.

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Boric Acid (H3BO3	TWA: 2mg/m3 STEL: 6mg/m3		

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Boric Acid (H3BO3)			TWA: 2mg/m3 STEL: 6mg/m3

Legend ACGIH - American Conference of Governmental Industrial Hygienists

Engineering Measures
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment
Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Powder Solid
Appearance:	White
Odor:	Odorless
Odor Threshold:	No information available
pH:	3.8-4.8 33 g/l aq.sol
Melting Point/Range:	169 °C / 336.2 °F
Boiling Point/Range:	No information available
Flash Point:	No information available
Evaporation Rate:	Not applicable
Flammability (solid,gas):	No information available
Flammability or explosive limits	
Upper:	No data available
Lower:	No data available
Vapor Pressure:	2.7 mbar @ 20 °C
Vapor Density:	Not applicable
Relative Density:	No information available
Solubility:	Partly soluble in water
Partition coefficient; n-octanol/water:	No data available
Autoignition Temperature:	Not applicable
Decomposition Temperature:	100 °C
Viscosity:	Not applicable
Molecular Formula:	H3 B O3
Molecular Weight: 61.83	

SECTION 10: STABILITY AND REACTIVITY DATA

Reactive Hazard: None known, based on information available
Stability: Moisture sensitive.
Conditions to Avoid: Incompatible products. Excess heat. Avoid dust formation. Exposure to moisture.
Incompatible Materials: Strong oxidizing agents, Strong bases
Hazardous Decomposition Products: Oxides of boron
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: None under normal processing.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity
Product Information
Component Information

Component	LD50 Oral	LD50Dermal	LC50 Inhalation
Boric Acid (H3BO3)	2660 mg/kg (RAT)	2000mg/kg (RABBIT)	>2.03mg/l (RAT) 4 h

Toxicologically Synergistic: No information available

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

Irritation Irritating to eyes and skin
Sensitization: No Information available
Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Boric Acid (H3BO3)	10043-53-3	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

Mutagenic Effects: Mutagenic effects have occured in microorganisms.
Reproductive Effects: Adverse reproductive effects have occurred in humans.
Developmental Effects: May cause harm to the unborn child. Developmental effects have occurred in experimental animals.
Teratogenicity: Teratogenic effects have occurred in experimental animals.

STOT - single exposure: Central nervous system (CNS)
STOT - repeated exposure: Kidney Liver Blood
Aspiration hazard: No information available
Symptoms / effects,both acute and delayed: No information available
Endocrine Disruptor Information: No information available
Other Adverse Effects:
The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Boric Acid (H3B03)	-	Gambusia affinis: LC50: 5600mg/l/96h	-	115 -153 mg/L EC50 48h

Persistence and Degradability:
Soluble in water Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation: No information available.
Mobility: Will likely be mobile in the environment due to its water solubility.

Component	Log Pow
Boric Acid (H3BO3)	-0.757

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: TRANSPORT INFORMATION

DOT: Not Regulated
TDG: Not Regulated
IATA: Not Regulated
IMDG/IMO: Not Regulated

SECTION 15: OTHER REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Boric Acid (H3BO3)	X	X	-	233-139-2	-	X	X	X	X	X	x

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base
Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

SECTION 16: OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if cienceLab.com has been advised of the possibility of such damages