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## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier BORIC ACID		Product Use Laboratory use	
Chemical formula H <sub>3</sub> BO <sub>3</sub>		Product code ; BB-0901 BR-0115 ; BP-0115; BU-0115	Molar weight 61,83
Chemical name / Commercial name / Synonymous BORIC ACID, ACIDE BORACIQUE, ACIDE ORTHOBORIQUE, BOROFAX, THREE ELEPHANT			
Supplier's name Laboratoire MAT		Address-Street 610, Adanac Street	
City Québec		Province Québec	
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Emergency phone	CANUTEC: 613-996-6666	CENTRE ANTI-POISON DU QUÉBEC 800-463-5060	
Date SDS 8/6/2019	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

### SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Reproductive toxicity category 1B
Signal Word	DANGER
Hazards statements (H)	H360 May damage fertility or the unborn child.
Precautionary statements (P)	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. P308 + P313 IF exposed or concerned: Get medical advice/attention. P405 Store locked up. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	Health 2 Fire 0 Reactivity 0 Special danger

### SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Acide borique	10043-35-3	<=100

## SECTION 04 - FIRST AID MEASURES

<b>Eye contact</b>	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
<b>Skin contact</b>	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
<b>Inhalation</b>	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
<b>Ingestion</b>	If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Most important symptoms and effects (acute and delayed)</b>	Ref. section 11.
<b>Immediate medical attention and special treatment, if necessary</b>	In case of medical consultation, keep this sheet available.
<b>General advice</b>	Show this safety data sheet to the doctor in attendance.

## SECTION 05 - FIREFIGHTING MEASURES

<b>Flammability</b>	No
<b>Ignition conditions</b>	Not flammable or combustible.
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	Not applicable.
<b>Hazardous combustion / decomposition products</b>	Hazardous decomposition products formed under fire conditions. Boron oxides. Borane.
<b>Special fire and explosion hazards</b>	May react violently with incompatible products (Ref Section 10). Boric acid reacts violently with acid anhydrides and potassium.
<b>Special protective equipment and precautions for firefighters</b>	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

## SECTION 06 - ACCIDENTAL RELEASE MEASURES

<b>Methods and materials for containment and cleaning up / Personnel precautions, protective equipment</b>	Evacuate personnel to safe areas. Pick up with a shovel or broom, taking care not to scatter dust. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container provided for the disposal of hazardous materials. Use a respirator as needed. Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust.
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## SECTION 07 - HANDLING AND STORAGE

<b>Conditions for safe storage</b>	Store in a cool, dry place. Keep container tightly closed and store away from heat, water, moisture, and incompatible products.
<b>Methods of handling</b>	Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14)

## SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace control parameters

Components	No.-CAS	Value	Control parameters	Basis
Boric acid	10043-35-3	TWA	2.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		STEL	6.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		No data available		Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		No data available		Canada. Ontario OELs
		No data available		Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

<b>Data source</b>	Sigma-Aldrich (Millipore Sigma)
<b>Ventilation</b>	Fan.
<b>Respiratory</b>	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
<b>Gloves</b>	Handle with gloves.
<b>Eyes</b>	Safety goggles with safety shutters.
<b>Shoes</b>	Safety shoes.
<b>Clothing</b>	Labcoat.
<b>Engineering control</b>	Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

## SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Solid.
<b>Appearance</b>	Poudre couleur blanche.-
<b>Odour</b>	Inodore.
<b>Odour threshold</b>	Data not available
<b>pH</b>	Solution aqueuse 3.8-4.8 @ 33 g/L..
<b>Melting point / Freezing point</b>	169°C (dec)
<b>Initial boiling point</b>	300°C
<b>Boiling range</b>	Data not available
<b>Flash point</b>	Data not available
<b>Evaporation rate</b>	Data not available
<b>Flammability</b>	No
<b>Lower flammable / Explosive limit</b>	Data not available
<b>Upper flammable / Explosive limit</b>	Data not available
<b>Vapour pressure</b>	2.6 mm @ 20°C-
<b>Vapour density</b>	Data not available
<b>Relative density</b>	1.435g/ml
<b>Solubility</b>	49.2 g/L @ 20 °C and pH 3.7..
<b>Partition coefficient water/n-octanol</b>	Data not available
<b>Auto-ignition temperature</b>	Data not available
<b>Decomposition temperature</b>	Data not available
<b>Viscosity</b>	Data not available

## SECTION 10 - STABILITY AND REACTIVITY

<b>Reactivity</b>	Non-reactive under normal conditions.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Stable under normal conditions.
<b>Conditions of instability (Including sensitivity to shock / static discharge / vibration)</b>	Avoid moisture.
<b>Incompatible material</b>	Acid anhydrides, alkali carbonates and hydroxides, metallic potassium and moisture.
<b>Hazardous decomposition products</b>	Boron oxides.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### BORIC ACID

<b>Routes of exposure</b>	Ingestion, inhalation, skin and eyes.
<b>Acute exposition effects / symptoms:</b>	By exposure route below.
<b>- Eyes</b>	Irritation and may cause inflammation of the conjunctiva.
<b>- Skin</b>	Irritation and dermatitis.
<b>- Inhalation</b>	Irritation of the mucous membranes and respiratory tract. Nervous disorders, chest pain, cough, dyspnea, headache, dizziness, weakness, nausea and vomiting. Acute inhalation of boric acid may result in cyanosis characterized by a blue-gray coloring of the skin and lips caused by lack of oxygen.
<b>Acute toxicity (Ingestion)</b>	Irritation of the mucous membranes. Abdominal pain, kidney damage, cramps, diarrhea, headache, dizziness, sweating, salivation, erythema, nausea and vomiting, tachycardia, cyanosis, delirium, convulsions, coma and can lead to death. Ingesting 5 to 20 grams can be fatal in humans.
<b>Chronic exposure effects / symptoms</b>	Burning sensation, dermatitis, conjunctivitis, nervous disorders, chest pain, cough, dyspnea, headache, dizziness, confusion, irritability, sweating, salivation, fatigue, erythema, nausea and vomiting. Chronic exposure to boric acid can cause borism, which is characterized by gastric disturbances and dry skin with rashes.
<b>DL50 (specify species and route of entry)</b>	2660 mg/kg.
<b>CL50 (specify species and route of entry)</b>	Data not available.

## SECTION 12 - ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Toxicity to fish: LC50: Ptychocheilus lucius - 279 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 133 mg/l - 48 h LC50 - Daphnia magna (Water flea) - 53.2 mg/l - 21 d
<b>Persistence and degradability</b>	Data not available.
<b>Bioaccumulative potential</b>	Data not available.
<b>Mobility in soil</b>	Data not available.
<b>Other adverse effects</b>	Data not available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

<b>Waste Disposal Method</b>	Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company.
<b>Contaminated Packaging</b>	Dispose of as unused product.

## SECTION 14 - TRANSPORT INFORMATION

UN Number	N/R
UN Proper shipping name	
Transport hazard class(es)	
Packing group	
Limited quantity index	
ERAP Index	
Special precautions	

## SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Reproductive toxicity category 1B
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## SECTION 16 - OTHER INFORMATION

### Further information

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Last Update: 8/6/2019