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## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier SODIUM TETRABORATE (BORAX)		Product Use Laboratory use	
Chemical formula Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10H <sub>2</sub> O		Product code SR-0187	Molar weight 381,37
Chemical name / Commercial name / Synonymous SODIUM TETRABORATE DECAHYDRATE, BORAX, BORAX DECAHYDRATE, BORATE DE SODIUM, BIBORATE DE SODIUM, PYROBORATE DE SODIUM			
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 8/29/2019	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 1 Fire 0 Reactivity 0 Special danger

### SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Tétraborate de sodium décahydrate	1303-96-4	<=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>	Rinse mouth with water. If the person is conscious, drink water and induce vomiting. 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>	Non flammable.
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	Data not available.
<b>Hazardous combustion / decomposition products</b>	Hazardous decomposition products formed under fire conditions. - Borane/boron oxides, Sodium oxides.
<b>Special fire and explosion hazards</b>	Keep product and empty containers away from heat and sources of ignition. Thermal decomposition can lead to the emission of irritating gases and vapors. May react violently with incompatible products (Ref Section 10).
<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 / Personal precautions, protective equipment</b>	Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Pick up with a shovel or broom, taking care not to scatter dust. Clean and rinse with water. Dispose of residues in a container provided for the disposal of hazardous materials. Do not let product enter drains.
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## SECTION 07 - HANDLING AND STORAGE

<b>Conditions for safe storage</b>	Efflorescent with dry air. Store in a cool, dry place. Store in a well-ventilated area. Keep container tightly closed and store away from heat, moisture, and incompatible products.
<b>Methods of handling</b>	Always open containers slowly to allow any excess pressure to vent. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust or vapor is formed. 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	CAS-No.	Value	Control parameters	Basis
Disodium tetraborate decahydrate	1303-96-4	TWAEV	2.000000 mg/m <sup>3</sup>	Canada. Ontario OELs
		STEL	6.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Not classifiable as a human carcinogen			
		STEV	6.000000 mg/m <sup>3</sup>	Canada. Ontario OELs
		TWAEV	1.000000 mg/m <sup>3</sup>	Canada. Ontario OELs
		TWAEV	5.000000 mg/m <sup>3</sup>	Canada. Ontario OELs
		TWAEV	1.000000 mg/m <sup>3</sup>	Canada. Ontario OELs
		TWA	1.000000 mg/m <sup>3</sup>	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required				
		TWAEV	5 mg/m <sup>3</sup>	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWAEV	5.000000 mg/m <sup>3</sup>	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	2.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
Adverse reproductive effect				
		STEL	6.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
Adverse reproductive effect				
		TWA	2.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
Not classifiable as a human carcinogen				
		TWA	2.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		STEL	6.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		STEL	3.000000 ppm	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required				
		TWA	2.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		STEL	6.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		TWA	2.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		STEL	6.000000 mg/m <sup>3</sup>	Canada. British Columbia OEL
		TWA	2 mg/m <sup>3</sup>	Canada. British Columbia OEL
		STEL	6 mg/m <sup>3</sup>	Canada. British Columbia OEL
		TWA	2.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)

		STEL	6.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		TWA	2.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		STEL	6.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		TWA	2.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		STEL	6.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		TWA	2 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		STEL	6 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)

<b>Data source</b>	Sigma-Aldrich.
<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 cristalline de couleur blanche.-
<b>Odour</b>	inodore.
<b>Odour threshold</b>	Data not available
<b>pH</b>	Solution aqueuse 0.01 M = pH 9.15 - 9.20.
<b>Melting point / Freezing point</b>	75°C
<b>Initial boiling point</b>	Se décompose au-dessous du point d'ébullition.-
<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>	Data not available
<b>Vapour density</b>	Data not available
<b>Relative density</b>	1.73g/cm <sup>3</sup>
<b>Solubility</b>	Soluble dans l'eau. Insoluble dans l'alcool.
<b>Partition coefficient water/n-octanol</b>	Log Pow: -1.53 @ 22 °C-
<b>Auto-ignition temperature</b>	Data not available
<b>Decomposition temperature</b>	> 100°C
<b>Viscosity</b>	Data not available

## SECTION 11 - TOXICOLOGICAL INFORMATION

### SODIUM TETRABORATE (BORAX)

<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 tearing.
<b>- Skin</b>	Irritation.
<b>- Inhalation</b>	Irritation of the mucous membranes and respiratory tract. Nervous disorders, dizziness, cough, dyspnea, headache, convulsions, nausea and vomiting.
<b>Acute toxicity (Ingestion)</b>	Irritation of the mucous membranes.
<b>Chronic exposure effects / symptoms</b>	Burning sensation, watery eyes, nervous disorders, kidney damage, chest pain, dizziness, cough, dyspnoea, laryngitis, headache, tiredness, loss of appetite, nausea and vomiting.
<b>DL50 (specify species and route of entry)</b>	LD50 Oral - Rat - 4,500 - 5,000 mg/kg. LD50 Dermal - Rabbit - > 2,000 mg/kg.
<b>CL50 (specify species and route of entry)</b>	LC50 Inhalation - Rat - 4 h -> 2.04 mg / l

## SECTION 12 - ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Toxicity to fish: LC50 - Carassius auratus (goldfish) - 178 mg / l - 72 h Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Great Daphnia) - 1,085 - 1,402 mg / l - 48 h Toxicity to algae: IC50 - Desmodesmus subspicatus (green algae) - 158 mg / l - 96 h
<b>Persistence and degradability</b>	The methods for determining biodegradability are not applicable to inorganic substances. Persistence is unlikely.
<b>Bioaccumulative potential</b>	No bioaccumulation is to be expected (log Pow <= 4).
<b>Mobility in soil</b>	Probable mobility in the environment due to its solubility in water.
<b>Other adverse effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## 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

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

## SECTION 15 - REGULATORY INFORMATION

<b>WHIMS CANADA</b>	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.

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