



Centre Anti-Poison pour le Québec: (800) 463-5060

Tél. (Qc): (418) 660-8666 / 800-890-8666


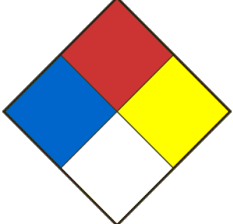
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SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier SODIUM BOROHYDRIDE		Product Use Laboratory use	
Chemical formula NaBH ₄		Product code SP-0132	Molar weight 37,83
Chemical name / Commercial name / Synonymous SODIUM BOROHYDRIDE, TÉTRAHYDROBORATE DE SODIUM, SODIUM TETRAHYDRIDOBORATE			
Supplier's name Laboratoire MAT		Address-Street 610, Adanac Street	
City Québec		Province Québec	
Postal code G1C 7B7	Internet www.labmat.com	Phone number 418-660-8666 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666		CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS 10/26/2018	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	<p>Substances and mixtures which, in contact with water, emit flammable gases category 1</p> <p>Acute toxicity - Dermal category 3</p> <p>Acute toxicity - Oral category 3</p> <p>Skin corrosion/irritation - Skin corrosion category 1B</p> <p>Serious eye damage/eye irritation - Serious eye damage category 1</p>
Signal Word	<p>DANGER</p>
Hazards statements (H)	<p>H260 In contact with water releases flammable gases which may ignite spontaneously.</p> <p>H301 Toxic if swallowed.</p> <p>H311 Toxic in contact with skin.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p>
Precautionary statements (P)	<p>P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.</p> <p>P231 + P232 Handle under inert gas. Protect from moisture.</p> <p>P260 Do not breathe dust / fume / gas / mist / vapours / spray.</p> <p>P264 Wash the areas of the body that have been in contact with the product after handling.</p> <p>P270 Do no eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P330 Rinse mouth.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P370 + P378 In case of fire: Use dry powder or dry sand for extinction.</p> <p>P402 + P404 Store in a dry place. Store in a closed container.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.</p> <p>P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.</p>
PICTOGRAMS	
Other dangers	<p>NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)</p>
	<p>Health 3</p> <p>Fire 4</p> <p>Reactivity 2</p> <p>Special danger EAU</p>

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Borohydrure de sodium	16940-66-2	<=100

SECTION 04 - FIRST AID MEASURES

Eye contact	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.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
Inhalation	If breathing is difficult, give oxygen. If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Consult a physician.
Most important symptoms and effects (acute and delayed)	Ref. section 11.
Immediate medical attention and special treatment, if necessary	In case of medical consultation, keep this sheet available.
General advice	Show this safety data sheet to the doctor in attendance.

SECTION 05 - FIREFIGHTING MEASURES

Flammability	Yes
Ignition conditions	Strong oxidizing agents, heat, sparks and open flame.
Suitable extinguishing media	Use only a class D fire extinguisher to extinguish the fire.
Unsuitable extinguishing media	Do not use water. Do not use carbon dioxide.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. - Borane/boron oxides, Sodium oxides.
Special fire and explosion hazards	Sodium borohydride in contact with water, alkalis, ethanol, ethylene glycol, methanol and phenol gives off hydrogen; a flammable and explosive gas. Violent reactions in contact with anhydrides, phosphoric acid, sulfuric acid, aluminum chloride + bis (2-methoxyethyl) ether and dimethylformamide. In the presence of sodium borohydride, the ruthenium salts form an explosive compound that is sensitive to the touch and in contact with water. May react violently with incompatible products (Ref Section 10).
Special protective equipment and precautions for firefighters	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

Methods and materials for containment and cleaning up / Personnel precautions, protective equipment	Evacuate personnel to safe areas. Cut off all sources of ignition. Pick up with a shovel or broom, taking care not to scatter dust. Ensure a good ventilation of the premises. When handling, wear appropriate safety equipment. Use a respirator as needed. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust. Wear respiratory protection. Dispose of residues in a container provided for the disposal of hazardous materials.
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SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Reacts violently with water. Store in a cool, dry place. Keep container tightly closed and store away from heat, sparks and open flame. Use venting and electrical equipment that is grounded and does not produce ignition sources (sparks). Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Heat sensitive. Store under inert gas. Keep in a dry place.
Methods of handling	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. Keep away from sources of ignition - No smoking.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control Citric acid	
BOROXYDRURE DE SODIUM	16940- 66-2	No data available	TLV, TWA, STEL	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		No data available	TLV, TWA, STEL	Canada. British Columbia OEL
		No data available	TLV, TWA, STEL	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

Ventilation	Use fan.
Respiratory	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
Gloves	Handle with gloves.
Eyes	Safety goggles with safety shutters.
Shoes	Safety shoes.
Clothing	Labcoat.
Engineering control	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

Physical state	Solid.
Appearance	Poudre blanche-
Odour	Donnée non disponible.
Odour threshold	Data not available
pH	Donnée non disponible.
Melting point / Freezing point	300-360°C
Initial boiling point	400°C
Boiling range	Data not available
Flash point	Data not available
Evaporation rate	Data not available
Flammability	Yes
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	Data not available
Vapour density	Data not available
Relative density	1.074g/cm ³
Solubility	Soluble dans l'eau (55 g/l à 25 °C) Soluble dans l'éther et le tétrahydrofuran..
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Non-reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Reacts violently with water.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	This product may decompose if exposed to moisture from the air and water. Avoid the accumulation of static electricity.
Incompatible material	Water, strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), strong bases, acids, alcohols, dimethyl formamide, phenol, metal salts, heat and humidity. Strong acids. Certains métaux.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Toxic vapors of hydrogen and boron oxides. Borane. - Sodium oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

SODIUM BOROHYDRIDE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe irritation and burning of the eye tissue that may lead to corneal ulceration and blindness.
- Skin	Severe irritation and tissue burn.
- Inhalation	Spasms, irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonia and pulmonary edema.
Acute toxicity (Ingestion)	Burns and ulcerations of the mouth, throat, esophagus and abdominal wall. Dysphagia, internal lesions, cramps, diarrhea, melena, nausea and vomiting, diaphoresis, convulsions, stupor, circulatory collapse, unconsciousness, coma and can lead to death.
Chronic exposure effects / symptoms	Burning sensation, nervous disorders, chest pain, cough, dyspnoea, laryngitis, headache, dizziness, diaphoresis, irritability, fatigue, weight loss, loss of appetite, convulsions, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 57 mg/kg. LD50 Dermal - Rabbit - > 2000 mg/kg
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 1h - 5.18 mg/L.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to fish: LC50 - Gambusia affinis (Mosquito fish) - 5600 mg/l - 96 h
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Data not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

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

SECTION 14 - TRANSPORT INFORMATION

UN Number	1426
UN Proper shipping name	BOROXYDRURE DE SODIUM
Transport hazard class(es)	4.3 Substances which, on contact with water, emit
Packing group	I
Limited quantity index	0kg
ERAP Index	1000
Special precautions	38

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Substances and mixtures which, in contact with water, emit flammable gases category 1 Acute toxicity - Dermal category 3 Acute toxicity - Oral category 3 Skin corrosion/irritation - Skin corrosion category 1B Serious eye damage/eye irritation - Serious eye damage category 1
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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: 10/26/2018