

**SECTION 01: PRODUCT AND COMPANY IDENTIFICATION**

**Product name:** Sodium Tetraborate  
**Formula:**  $\text{Na}_2\text{B}_4\text{O}_7$   
**Chemical family:** Borate  
**Product use:** For laboratory use only  
  
**Manufacturer:** CLAISSE  
**Address:** 350, FRANQUET, QUEBEC, QUEBEC  
 G1P 4P3, CANADA  
**Phone:** 1 418 656-6453  
**Fax:** 1 418 656-1169

**Emergency telephone number:**  
 CANUTEC (24h): +1 613 996-6666

**SECTION 02: HAZARDS IDENTIFICATION**
**GHS and (EC) No 1272/2008 classification**

Eye irritation (Category 2)  
 Reproductive Toxicity (Category 1B)

**Label elements:**

Pictograms:



Signal word: **Danger**  
 (GHS08)

**Hazard statements:**

H319 Causes serious eye irritation.  
 H360FD May damage fertility. May damage the unborn child.

**Precautionary statements:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P264 Wash hands thoroughly after handling.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

**Other hazards**

No data available.

**SECTION 03: COMPONENT INFORMATION**

Compounds	Molecular formula	Synonyms	Molecular Weight (g/mol)	CAS-No.	EC-No.	Concentration (%)
Sodium Tetraborate	Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub>	Anhydrous borax	201.22	1330-43-4	215-540-4	100

**SECTION 04: FIRST AID MEASURES****Description of first aid measures****General information**

Seek immediate medical advice.  
Take affected persons out of danger area and lay down.

**After inhalation**

In case of unconsciousness, place patient stably in side position for transportation.  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. If symptoms persist, consult a physician.

**After skin contact**

Immediately wash with water and soap and rinse thoroughly. If skin irritation persists, consult a physician.

**After eye contact**

Rinse opened eye thoroughly with plenty of water for at least 15 minutes and consult a physician.

**After swallowing**

Rinse out mouth and then drink plenty of water. Do not induce vomiting. If symptoms persist, consult a physician.

**Most important symptoms and effects, both acute and delayed**

Symptoms: ingestion or absorption may cause anderythematous lesions on the skin and mucous membranes. Other symptoms delirium, convulsions, and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

**Indication of any immediate medical attention and special treatment needed**

Treatment: Treat symptomatically and specialist advice physicians should contact the Poisons Information Service.

**SECTION 05: FIRE FIGHTING MEASURES****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable extinguishing media**

No data available.

**Special protective equipment for fire fighters**

Wear self-contained breathing apparatus for fire fighting if necessary. Wear full protective clothing and self-contained breathing apparatus (SCBA) approved for firefighting. This is necessary to protect against the hazards of heat, products of combustion and oxygen deficiency. Do not breathe smoke, gases or vapors generated.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions – Borane/boron oxides, Sodium oxides.

**SECTION 06: ACCIDENTAL RELEASE MEASURES****Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, fumes or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**

Avoid dispersal of spilled material, runoff and contact with soil waterways, drains and sewers.

**Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed and non-leaking containers for local chemical disposal.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protective equipment.

See Section 13 for disposal information.

**SECTION 07: HANDLING AND STORAGE****Precautions for safe handling**

Provide suction extractors if dust is formed.

Do not inhale dust, smoke or mist.

Do not ingest.

Avoid contact with the eyes, skin and clothing.

Prevent formation of dust.

Prevent formation of aerosols.

**Conditions for safe storage, including any incompatibilities**

Requirements to be met by storerooms and receptacles: no special measures required.

Information about storage in one common storage facility: not required.

Further information about storage conditions: keep container tightly sealed; store receptacle in a well-ventilated area; store in dry conditions and away from any incompatible materials (see section 10).

**Specific end use(s)**

No data available.

**SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

These substances do not have occupational exposure limit values.

**Personal protective equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work shifts. Avoid contact with the eyes and skin.

**Respiratory protection**

For nuisance exposure, use type N95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. The glove material has to be impermeable and resistant to the product, the substance or preparation. Selection of the glove material must be made considering the penetration times, rates of diffusion and degradation. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.



Protective gloves.

**Eye protection**

Wear safety glasses with side shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).



Safety glasses with side shields (EN 166).

**Skin and body protection**

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific workplace. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Specific engineering controls**

Use mechanical exhaust or laboratory fume hood to avoid exposure.

**Environmental exposure controls**

No data available.

**SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**
**Appearance**

Form: Powder  
 Colour: White

**Safety data**

pH: No data available  
 Melting point/freezing point: 741°C / 1366°F  
 Initial boiling point/boiling range: 1575°C / 2867°C  
 Flash point: No data available  
 Flammability: No data available  
 Ignition point: No data available  
 Autoignition point: No data available  
 Lower flammable/explosive limit: No data available  
 Upper flammable/explosive limit: No data available  
 Vapour pressure: No data available  
 Relative density: 2.367 g/cm<sup>3</sup>  
 Solubility: 25.6 g/L at 20°C  
 Partition coefficient n-octanol/water: Log Pow: -1.529 at 22°C

Decomposition temperature:	No data available
Viscosity:	No data available
Relative vapour density:	No data available
Odour:	Odorless
Odour threshold:	No data available
Evaporation rate:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

No data available.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available.

### Conditions to avoid

Avoid contact with incompatible materials and moisture.

### Incompatible materials

Potassium and acid anhydrides.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Borane/boron oxides, Sodium oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

Compounds	Oral LD <sub>50</sub>	Inhalation LC <sub>50</sub>	Dermal LD <sub>50</sub>	Other
Sodium Tetraborate	>2400 mg/kg b.w.	No data	>2000 mg/kg b.w.	No data

### Repeated exposure toxicity

Compounds	Oral DNEL	Inhalation DNEL	Dermal DNEL	Other
Sodium Tetraborate	No data	No data	No data	No data

### Skin corrosion/irritation

No data available.

### Serious eye damage/eye irritation

Based on OECD Guideline 405 (Acute Eye Irritation / Corrosion) study, sodium tetraborate solution showed moderate eye irritation.

### Respiratory or skin sensitization

Based on OECD Guideline 406 (Skin Sensitisation) study, sodium tetraborate was regarded to not be sensitising to the skin.

### Germ cell mutagenicity (in vitro) – gene mutation

No data available.

**Germ cell mutagenicity (in vivo) – DNA damage and/or repair**

No data available.

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**Reproductive toxicity**

Fetotoxicity and human reproductive toxicant presumed.

**STOT-SE (GHS)**

No data available.

**STOT-RE (GHS)**

No data available.

**Aspiration hazard**

No data available.

**Potential health effects**

Inhalation: May be harmful if inhaled.  
 Skin: May be harmful if absorbed through skin.  
 Eyes: Causes moderate eye irritation.  
 Ingestion: May be harmful if swallowed.

**Signs and symptoms of exposure**

Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions on the skin and mucous membranes. Other symptoms include circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

No data available.

**Additional information**

Compounds	RTECS
Sodium Tetraborate	ED4588000

**SECTION 12: ECOLOGICAL INFORMATION**
**Toxicity**

Aquatic toxicity

Compounds	NOEC	LOEC
Sodium Tetraborate	6.4 mg/L	No data

**Persistence and degradability**

Not applicable to inorganic substances.

**Bioaccumulative potential**

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

**Mobility in soil**

No data available. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

**Other adverse effects**

Will affect drinking water supplies. The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have harmful or damaging effects on the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS****Product disposal**

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated Packaging Disposal**

Dispose as an unused product.

**Waste treatment-relevant information**

Disposal of this product, solutions and any by-products should at all times comply with the requirements of the environmental protection and waste disposal legislation and any regional and local authority requirements.

**Sewage disposal-relevant information**

Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.

**Other disposal recommendations**

Contact a licensed professional waste disposal service to dispose of this material.

**SECTION 14: TRANSPORT INFORMATION****UN number**

ADR, ADN, IMDG, IATA, TDG, DOT Not dangerous goods

**UN Proper shipping name**

Not applicable.

**Transport hazard class(es)**

ADR, ADN, IMDG, IATA, TDG, DOT Not applicable

**Packing group**

ADR, ADN, IMDG, IATA, TDG, DOT Not applicable

**Environmental hazards**

Environmentally hazardous substance/marine pollutant: No

**Special precaution for user**

Not applicable.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**SECTION 15: REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety data sheet complies with the requirements of regulation GHS and (EC) No 1907/2006.

**Chemical safety assessment**

A chemical safety assessment has not been carried out.

**DSL status**

All components of this product are on the Canadian DSL list.

**Emergency overview**

Target organs: Central nervous system, kidney and testes.

**WHMIS classification**

Not regulated.

**SECTION 16: OTHER INFORMATION****Date of issue**

2017-10-26

**Notice to the reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the only responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only.

ACGIH:	American Conference of Governmental Industrial Hygienists
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterway
b.w.:	Body weight
CAA:	Clean Air Act
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
CEN:	European Committee for Standardization
CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act
CFR:	Code of Federal Regulations
CLP:	Classification, Labelling and Packaging
CPR:	Controlled Products Regulations
DNEL:	Derived No-Effect Level
DOT:	Department of Transportation
DSL:	Domestic Substance List
EINECS:	European Inventory of Existing Commercial Chemical Substances



GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
HDPE:	High Density PolyEthylene
HEPA:	High Efficiency Particulate Air
HMIS:	Hazardous Material Information System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
IBC:	Intermediate Bulk Container
IDLH:	Immediately Dangerous to Life or Health Concentrations
IMDG:	International Maritime Dangerous Goods Code
LC50:	Median Lethal Concentration
LD50:	Median Lethal Dose
LOAEL:	Lowest Observed Adverse Effect Level
LOEC:	Lowest Observable Effect Concentration
MARPOL:	MARine POLLution
NIOSH:	The National Institute for Occupational Safety and Health
NOAEL:	No Observed Adverse Effect Level
NOEC:	No Observable Effect Concentration
OECD:	Organisation for Economic Co-operation and Development
OEL:	Occupational Exposure Level
OSHA:	Occupational Safety and Health Administration
PBT:	Persistent Bioaccumulative and Toxic
PEL:	Permissible Exposure Limits
PNEC:	Predicted No-Effect Concentration
RCF:	Refractory Ceramic Fibers
REL:	Recommended Exposure Limit
RTECS:	Registry of Toxic Effects of Chemical Substances
SARA:	Superfund Amendments and Reauthorization Act
SCP:	Standards Completion Program (NIOSH/OSHA)
STEL:	Short Term Exposure Limit
STOT – RE:	Specific Target Organ Toxicity – Repeated exposure
STOT – SE:	Specific Target Organ Toxicity – Single exposure
TDG:	Transport of Dangerous Goods
TLV:	Threshold Limit Value
TSCA:	Toxic Substances Control Act
TWA:	Time-Weighted Average exposure value
UN:	United Nations
vPvB:	very Persistent and very Bioaccumulative
WHMIS:	Workplace Hazardous Materials Information System
WEEL:	Workplace Environmental Exposure Levels