

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

CAS Number: 1303-96-4
Product Name: Borax Decahydrate (10 MOL)
Revision Date: Jul 04, 2017 **Date Printed:** Apr 06, 2021
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Thames River Chemical Corp.
Address: 5230 Harvester Road Burlington, ON, CA, L7L 4X4
Emergency Phone: CHEMTREC (800) 424-9300
Information Phone Number: 905-681-5353
Fax: 905-681-5377
Product/Recommended Uses: For laboratory or industrial use only.

SECTION 2) HAZARDS IDENTIFICATION**Classification**

Acute toxicity Oral - Category 5
Eye Irritation - Category 2A
Reproductive Toxicity - Category 2

Pictograms**Signal Word**

Warning

Hazard Statements - Health

May be harmful if swallowed
Causes serious eye irritation
Suspected of damaging fertility or the unborn child

Precautionary Statements - General

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Precautionary Statements - Prevention

Wash/Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Precautionary Statements - Response

Call a POISON CENTER or doctor, if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF exposed or concerned: Get medical advice/attention.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

Physical Hazards Not Otherwise Classified

No data available.

Health Hazards Not Otherwise Classified

No data available.

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0001303-96-4	SODIUM BORATE	100%

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Eye Contact

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Seek medical attention.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed.

Ingestion

If large amounts are swallowed (i.e. more than one teaspoon), give two glasses of water or milk to drink and seek medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed

No data available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians

Observation only is required for adult ingestion of less than 9 grams of borax decahydrate. For ingestion in excess of 9 grams, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Haemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing media suitable for surrounding fire.

Unsuitable Extinguishing Media

None in particular

Specific Hazards in Case of Fire

Non-flammable.

None – Borax is non-flammable, combustible or explosive. The product is itself a flame retardant.

Fire-fighting Procedures

Use appropriate extinguishing measure suitable for surrounding fire.

Special Protective Actions

Wear self-contained breathing apparatus and full protective clothing.

Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

No data available.

Recommended Equipment

Wear chemical protective clothing.

Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.

Environmental Precautions

Borax decahydrate is a water-soluble white powder that may cause damage to trees or vegetation by root absorption

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Vacuum, shovel or sweep up borax decahydrate and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. No personal protective equipment is needed to clean up land spills.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use. Do not get in eyes, on skin or on clothing. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. Eyewash stations and showers should be available in areas where this material is used and stored

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits.

Storage Room Requirements

No special handling precautions are required, but dry, indoor storage is recommended. To maintain package integrity and to minimise caking of the product, bags should be handled on a first-in first-out basis. Good housekeeping procedures should be followed to minimise dust generation and accumulation. Your supplier can advise you on safe handling, please contact him.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection

None.

Skin Protection

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	CANsmg	CANsppm	CANtmg	CANtppm	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)
SODIUM BORATE	10		5					

Chemical Name	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH TLV Basis
SODIUM BORATE				6 (I)		2 (I)		URT irr

Chemical Name	ACGIH Carcinogen	ACGIH Notations
SODIUM BORATE	A4	A4

(I) - Inhalable fraction, A4 - Not Classifiable as a Human Carcinogen, irr - Irritation, URT - Upper respiratory tract

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	
Specific Gravity	1.71
Appearance	White Crystalline solid
Odor Description	Odourless
Odor Threshold	N/A
pH	9.3 (0.1% solution), 9.2 (1.0% solution), 9.3 (4.7% solution)
Melting Point	62 (heated in closed space) °C
Low Boiling Point	1575 °C
High Boiling Point	N/A
Flash Point	Non-flammable
Vapor Pressure	Negligible @ 20°C
Vapor Density	N/A
Evaporation Rate	N/A
Upper Explosion Level	N/A
Lower Explosion Level	N/A
Water Solubility	4.7% @ 20°C; 65.6% @ 100°C

Coefficient Water/Oil N/A
Viscosity N/A

SECTION 10) STABILITY AND REACTIVITY**Reactivity**

No data available.

Stability

Borax decahydrate is a stable product, but when heated it loses water, eventually forming anhydrous borax (Na₂ B₄ O₇).

Conditions to Avoid

No data available

Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

Incompatible Materials

Reaction with strong reducing agents such as metal hydrides, acetic anhydride or alkali metals will generate hydrogen gas which could create an explosive hazard.

Hazardous Decomposition Products

None under normal handling and storage conditions.

SECTION 11) TOXICOLOGICAL INFORMATION**Likely Route of Exposure**

Inhalation, ingestion, skin absorption

Acute Toxicity

Ingestion: Low acute oral toxicity; LD50 in rats is 6,000 mg/kg of body weight.
Skin: Low acute dermal toxicity; LD50 in rabbits is greater than 2,000 mg/kg of body weight. Borax decahydrate is poorly absorbed through intact skin.
Inhalation: Low acute inhalation toxicity; LC50 in rats is greater than 2.0 mg/l (or g/m³).

Aspiration Hazard

Based on available data, the classification criteria are not met.

Carcinogenicity

This product is not listed as a carcinogen

Germ Cell Mutagenicity

Not Mutagenic in a standard battery of genetic toxicological test.

Reproductive Toxicity

Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes<2>. Studies with the chemically related boric acid in rat, mouse and rabbit, at high doses, demonstrate developmental effects on the foetus including foetal weight loss and minor skeletal variations. The doses administered were many times in excess of those which humans would normally be exposed to <3,4,5>.

Respiratory/Skin Sensitization

Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation

Causes serious eye irritation

Skin Corrosion/Irritation

Non-irritant.

Specific Target Organ Toxicity - Repeated Exposure

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure

Based on available data, the classification criteria are not met.

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Phytotoxicity:

Boron is an essential micronutrient for healthy growth of plants, however, it can be harmful to boron sensitive plants in higher quantities. Care should be taken to minimise the amount of borate product released to the environment.

Algal toxicity: Green algae, *Scenedesmus subspicatus* 96-hr IC10 = 24 mg B/l

Invertebrate toxicity: *Daphnia*, *Daphnia magna* Straus 24-hr IC50 = 242 mg B/l

Fish toxicity: *Dab*, *Limanda limanda* 96-hr LC50 = 74 mg B/l

Fresh water: Rainbow trout, *Oncorhynchus mykiss* (embryo-larval stage) 24-day LC50 = 88 mg B/l, 32-day LC50 = 54 mg B/l
 Goldfish, *Carassius auratus* (embryo-larval stage)
 7-day LC50 = 65 mg B/l
 3-day LC50 = 71 mg B/l

Mobility in Soil

The product is soluble in water and is leachable through normal soil.

Bioaccumulative Potential

No data available.

Persistence and Degradability

Boron is naturally occurring and ubiquitous in the environment. Borax decahydrate decomposes in the environment to natural borate.

Other Adverse Effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste management should be in full compliance with federal, state and local laws.

Waste Disposal

SECTION 14) TRANSPORT INFORMATION

	Transport Canada Information	U.S. DOT Information
UN number:	Not Regulated	Not Regulated
Proper shipping name:	N/A (N/A)	N/A (N/A)
Hazard class:	Not Applicable	Not Applicable

Packaging group:	Not Applicable	Not Applicable
Hazardous substance (RQ):		No Data Available
Marine Pollutant:	No Data Available	No Data Available
Note / Special Provision:	No Data Available	No Data Available
Toxic-Inhalation Hazard:		No Data Available
Transport in bulk (according to Annex II of MARPOL 73/78):	No Data Available	

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0001303-96-4	SODIUM BORATE	100%	DSL,TSCA,REACH_SVHC - REACH_Substances of Very High Concern

SECTION 16) OTHER INFORMATION

Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CANsmg or CANspmm - Canadian Short Term Exposure Level in mg/L or in ppm; CANTmg or CANTppm - Canadian Time Weighted Average in mg/L or in ppm; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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