

Borax 10 MOL

MSDS Number: rm-Brx10

Revision Date: 2/20/2015

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1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Borax 10 MOL
Revision Date: 2/20/2015
Version: 1.1
MSDS Number: rm-Brx10
Common Name: Sodium Tetraborate Decahydrate
CAS Number: 1303-96-4
Chemical Family: Inorganic Salt
Chemical Formula: Na₂B₄O₇·10H₂O
Synonyms: Borax, Disodium Tetraborate Decahydrate, Sodium Diborate Decahydrate, Deca Borax, Borax 10 mol Ph

Supplier:

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100 Brook Street
West Hartford, CT 06110

860-232-9990 (Phone)
860-232-9995 (Fax)

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info@RoseMill.com

2 HAZARDS IDENTIFICATION

Route of Entry: Eyes; Mild eye irritant. Inhalation: Occasional mild irritation effects to nose and throat may occur from inhalation of dust levels greater than 10m/m³.

Target Organs: No target organs have been determined in humans. High does animal ingestion studies indicate the testes are the target organ.

Inhalation: Occasional mild irritation effects to nose and throat may occur from inhalation of anhydrous borax dusts at level greater than 10 mg/m³.

Skin Contact: Non-irritating.

Eye Contact: Does not cause eye irritation in normal industrial use.

Ingestion: Product not intended for ingestion and has low acute toxicity, Small amount (e.g a teaspoonful) swallowed accidentally are not likely to cause effects: swallowing amounts larger than that may cause gastrointestinal symptoms.

GHS Signal Word:
DANGER

GHS Hazard Pictograms:



GHS Classifications:
Health, Reproductive toxicity, 1

GHS Phrases:

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H360 - May damage fertility or the unborn child

GHS Precautionary Statements:

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P332+313 - If skin irritation occurs: Get medical advice/attention.

P264 - Wash _ thoroughly after handling.

Sodium Tetraborate Decahydrate is a white odorless, powdered substance that is not flammable, combustible, or explosive and it presents no unusual hazard if involved in a fire. It presents little or not hazard (to humans) and has low acute oral and dermal toxicities. Care should be taken to minimize the amount released to the environment to avoid ecological effects.

3	COMPOSITION/INFORMATION ON INGREDIENTS
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Ingredients:

Cas #	Percentage	Chemical Name
1303-96-4	>99%	Borates, tetra, sodium salts (decahydrate)
1303-96-4	>99%	Borax (B4Na2O7.10H2O)

4	FIRST AID MEASURES
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- Inhalation:** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
- Skin Contact:** Wash with soap and water.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.
- Ingestion:** Non intended for digestion. Small amounts (e.g.a teaspoonful) swallowed accidentally are not likely to cause effects. If large amounts are swallowed, give two glasses of water or milk to drink and seek medical attention.

5	FIRE FIGHTING MEASURES
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- Flammability:** Non flammable
- Flash Point:** Not applicable

Product is non-flammable, non-combustible and not explosive. Product is often used as flame retardant. Any fire extinguishing media may be used on fires.

6	ACCIDENTAL RELEASE MEASURES
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Borates may damage trees and vegetation. For dry spills, sweep, vacuum, or shovel and place in containers for disposal in accordance with applicable regulations. Avoid contamination of bodies of water during cleanup. Can cause localized contamination of surrounding waters depending on amount dissolved in these waters. Some damage to local vegetation, fish, and other aquatic life may be expected. Under usual conditions, no protective equipment is required. Remove any intact containers from water where possible. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level. Product is a non-hazardous waste when spilled or disposed of , as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). Vacuum or sweep the material into a bag or other sealed container and dispose in accordance with local requirements.

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7	HANDLING AND STORAGE
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Handling Precautions: No special handling precautions are required.

Storage Requirements: Dry, indoor storage is recommended. To maintain package integrity and to minimize caking of the product, bags should be handled on a first-in, first-out basis. Good housekeeping procedures should be followed to minimize dust generation and accumulation. The product should be kept away from strong reducing agents.

8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Engineering Controls: All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94).

Personal Protective Equip: Use goggles or vented safety glasses in excessively dusty conditions. In poorly ventilated areas you must wear a supplied air respirator.

Symptoms of accidental overexposure to Borates have been associated with ingestion or absorption through large areas of damaged skin. These may include nausea, vomiting, and diarrhea, with delayed effects of skin redness and peeling.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	White granule or powder	Molecular Formula:	Na ₂ B ₄ O ₇ ·10H ₂ O
Spec Grav./Density:	1.71	Solubility:	4.71% @ 20C; 65.64% @ 100C
Boiling Point:	1575 deg C @ 760.00mm Hg	Freezing/Melting Pt.:	62C (144F) heated in closed space
Vapor Pressure:	Negligible @ 20C		
pH:	9.3 (.1% solutions); 9.2 (1.0 % solution)		
Molecular weight:	381.37		

10	STABILITY AND REACTIVITY
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Stability: Product is stable under normal conditions.

Materials to Avoid: Strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas that could create an explosive hazard.

Hazardous Decomposition: none

Hazardous Polymerization: Will not occur.

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TOXICOLOGICAL INFORMATION

Acute Toxicity:

Oral (LD 50): Low acute oral toxicity. LLD50 in rats is 4,500 to 5,000 mg/kg of body weight.

Inhalation (LC 50): Low acute inhalation toxicity. LC50 ini rats is greater than 2.0 mg/L

Skin irritation: Low acute dermal toxicity; LD50 in rabbits is greater than 10,000 mg/kg of body weight. Poorly absorbed through intact skin. Non irritant.

Eye irritation: Draize test in rabbits produced eye irritation effects. Fifty years of occupational exposure to borax 5 mol indicates no adverse effects on human eye. Not considered to be a human eye irritant in normal industrial use.

Sensitisation: Not a skin sensitizer.

Reproductive/developmental toxicity: Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Doses administered were many times in excess of those to which humans would normally be exposed.

Carcinogenicity/mutagenicity: No evidence of carcinogenicity in mice. No mutagenic activity was observed for boric acid in a matter of short term mutagenicity assays.

Human data: Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to sodium borate dust. A recent epidemiology study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility.

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ECOLOGICAL INFORMATION

General: Boron is the element in borax 5 mol which is used by convention to report borate product ecological effects. It occurs naturally in seawater at an average concentration of 5 mg B/L and generally occurs in fresh water at concentration up to 1 mg B/L. In dilute aqueous solutions the predominant boron species present is undissociated boric acid.

Phytotoxicity: boron is an essential micronutrient for healthy growth of plants; however, it can be harmful to boron sensitive plants in large quantities. Care should be taken to minimize the amount of boron released to the environment.

Algal toxicity: Green algae. *Scenedesmus subspicatus* 96hr EC10 = 24 mg B/L

Invertebrate toxicity: Daphnids, *Daphnia magna* straus 24hr EC50= 242 mg B/L

Fish toxicity: sea water: Dab, *Limanda limanda* 96hr LC50= 74mg B/L

Fresh water: Rainbow trout, *S. gairdneri* (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

Test substance: sodium tetraborate

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13	DISPOSAL CONSIDERATIONS
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Small quantities can usually be disposed of at landfill sites. No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Tonnage quantities of product are not recommended to be sent to landfills. Such product should, if possible, be used for an appropriate application.

14	TRANSPORT INFORMATION
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Not hazardous product according to these transport classifications.

15	REGULATORY INFORMATION
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COMPONENT / (CAS/PERC) / CODES

*Borates, tetra, sodium salts (decahydrate) (1303964 n/a%) MASS, OSHAWAC, PA, TSCA, TXAIR

*Borax (B₄Na₂O₇·10H₂O) (1303964 n/a%) MASS, OSHAWAC, PA, TSCA, TXAIR

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

16	OTHER INFORMATION
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