

**Borax**

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**1. PRODUCT AND COMPANY IDENTIFICATION**

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**Product Name:** Borax

**Synonyms/Generic Names:** Sodium borate Decahydrate; sodium tetraborate

**SDS Number:** 104.00

**Product Use:** For Educational Use Only

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information Contact:** Ward's Science  
5100 West Henrietta Rd.  
PO Box 92912-9012  
Rochester, NY 14692  
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

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**2. HAZARDS IDENTIFICATION**

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**OSHA Hazards:** Teratogen, Reproductive hazard

**Target Organs:** None

**Signal Words:** Danger

**Pictograms:**



**GHS Classification:**

Acute toxicity, Oral	Category 5
Reproductive toxicity	Category 1B

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

H303	May be harmful if swallowed.
H360	May damage fertility or the unborn child.

**Precautionary Statements:**

P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.

**Potential Health Effects**

<b>Eyes</b>	May cause eye irritation.
<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Ingestion</b>	May be harmful if swallowed.

**NFPA Ratings**

<b>Health</b>	1
<b>Flammability</b>	0
<b>Reactivity</b>	0
<b>Specific hazard</b>	Not Available

**HMIS Ratings**

<b>Health</b>	1
<b>Fire</b>	0
<b>Reactivity</b>	0
<b>Personal</b>	E

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Sodium Borate Decahydrate	>98	1303-96-4	215-540-4	Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> •10H <sub>2</sub> O	381.37 g/mol

**4. FIRST-AID MEASURES**

<b>Eyes</b>	In case of eye contact, rinse with plenty of water and seek medical attention if necessary.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
<b>Skin</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

**5. FIRE-FIGHTING MEASURES**

<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (boron oxides, sodium oxides) under fire conditions. See also Stability and Reactivity section.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Pick up and arrange spill without creating dust. Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

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## 7. HANDLING AND STORAGE

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### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Borate compounds, Inorganic	2 mg/m <sup>3</sup>	TLV	ACGIH
	6 mg/m <sup>3</sup>	CEIL	ACGIH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<b>Other</b>	Not Available

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance (physical state, color, etc.)	White crystalline powder.
Odor	Odorless.
Odor threshold	Not Available
pH	9.2-10
Melting point/freezing point	75°C (167°F)
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive

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Vapor pressure	Not Available
Vapor density	Not Available
Relative density	1.73 g/cm <sup>3</sup>
Solubility (ies)	Soluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

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## 10. STABILITY AND REACTIVITY

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<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Not Available
<b>Incompatible Materials</b>	Strong oxidizing agents, strong reducing agents.
<b>Hazardous Decomposition Products</b>	Boron oxides, sodium oxides.

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

<b>Skin</b>	LD50 – Rabbit – 10,000 mg/kg
<b>Eyes</b>	Not Available
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	LD50 – Rat – 4,500-5,000 mg/kg

### Carcinogenicity

<b>IARC</b>	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>NTP</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Signs & Symptoms of Exposure

<b>Skin</b>	Irritation.
<b>Eyes</b>	Irritation, redness.
<b>Respiratory</b>	Irritation to mucous membrane.
<b>Ingestion</b>	Gastrointestinal pain, diarrhea, nausea, vomiting.

<b>Chronic Toxicity</b>	Damage to reproductive system.
<b>Teratogenicity</b>	Harmful to fetus.
<b>Mutagenicity</b>	Not Available
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Reproductive organs
<b>Reproductive Toxicity</b>	Presumed human reproductive toxicant
<b>Respiratory/Skin Sensitization</b>	Not Available

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

<b>Aquatic Vertebrate</b>	LC50 – Carassius auratus – 178 mg/L – 72h
<b>Aquatic Invertebrate</b>	EC50 – Daphnia magna – 1,085 mg/L – 48h
<b>Terrestrial</b>	IC50 – Desmodesmus subspicatus – 158 mg/L – 96h

<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

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## 13. DISPOSAL CONSIDERATIONS

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<b>Waste Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste products or residues.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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## 14. TRANSPORTATION INFORMATION

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US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

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## 15. REGULATORY INFORMATION

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TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Sodium Borate
SARA 312	Sodium Borate
SARA 313	Not Listed
WHMIS Canada	Class D-2B: Poisonous and infectious material- Other effects- Toxic

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## 16. OTHER INFORMATION

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Revision	Date
Revision 1	01/14/2013
Revision 2	06/21/2013

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