



Material Safety Data Sheet

Boratebuffers

Section 1 - Chemical Product and Company Identification

MSDS Name:

Borate buffers

Catalog Numbers:

LC11700, LC22962

Synonyms:

Boratebuffer,apha,fornitrogen(ammonia)

Company Identification:

LabChem, Inc.
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
1303-96-4	Borates, tetra, sodium salts, decahydrate	<0.48
1310-73-2	Sodium hydroxide	<0.28

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Colorless

Caution! May cause severe eye and skin irritation with possible burns.

Target Organs: none known.

Potential Health Effects

Eye:

Irritant, produces pain, reddening, conjunctivitis, and in sufficient concentrations, corneal burns.

Skin:

Irritant, can produce reddening and insufficient concentration burn, blistering. Borates absorbed through the skin producing skin eruptions, anuria, fever.



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Ingestion:

Vomiting, diarrhea, burn to mouth, convulsions, throat and stomach; oliguria/anuria leading to cyanosis, hypotension, coma, death (fatal dose range 2-30+ grams).

Inhalation:

Mucous membrane irritation. May produce sore throat, headache, nausea, dizziness, vomiting, coughing, dyspnea, pneumonitis, rhinitis, bronchitis, pharyngitis, possible pulmonary edema.

Chronic:

Hazards: dermatitis, conjunctivitis, possible neurotoxicity with liver and kidney damage.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:

Do NOT induce vomiting. Get medical aid at once. If victim is unconscious, give 2-4 glasses of water to dilute alkali. Medical personnel may administer oxygen, maintain airway and blood pressure; gastric lavage may be performed.

Inhalation:

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

Negligible fire and explosion hazard when exposed to heat or flame. Avoid breathing vapors, use approved respirator if necessary. Move container if possible, avoid breathing vapors or dust.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

No information found.

Flash Point:

No information found.

NFPA Rating:

CAS# 7732-18-5: Not published.

CAS# 1303-96-4: Not published.

CAS# 1310-73-2: Not published.

Explosion Limits:

Lower: Upper:



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Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Area may be washed down with water.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

Storage:

Store capped at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Provide local exhaust or general dilution ventilation.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Borates, tetra, sodium salts, decahydrate	1 mg/m ³ TWA (anhydrous); 5 mg/m ³ TWA (decahydrate); 1 mg/m ³ TWA (pentahydrate)	5 mg/m ³ TWA	None of the components are on this list.
Sodium hydroxide	None of the components are on this list.	None of the components are on this list.	2 mg/m ³ TWA;

OSHA Vacated PELs

Borates, tetra, sodium salts, decahydrate: 10 mg/m³ TWA

Borates, tetra, sodium salts, decahydrate: 10 mg/m³ TWA

Personal Protective Equipment

Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Not required for normal use.



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Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Color: Colorless
Odor: Odorless
pH: Alkaline
Vapor Pressure: 14mm Hg @20°C
Vapor Density: > air
Evaporation Rate: < ether
Viscosity: No information found.
Boiling Point: > 212°F (> 100.00°C)
Freezing/Melting Point: < 32°F (< 0.00°C)
Decomposition Temperature: No information found.
Solubility in water: Soluble.
Specific Gravity/Density: 1.0
Molecular Formula: No information found.
Molecular Weight: No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials

Strong oxidizing agents, strong acids, water reactive substances (e.g. sulfuric acid, sodium metal, potassium metal, calcium carbide).

Hazardous Decomposition Products

Sodium oxide.

Hazardous Polymerization

Has not been reported

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 1303-96-4: VZ2275000.

CAS# 1310-73-2: WB4900000.



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LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 1303-96-4:

Oral, mouse: LD50 = 2 gm/kg

Oral, rat: LD50 = 2660 mg/kg.

CAS# 1310-73-2:

No information found.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 1303-96-4: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 1310-73-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

Borate poisoning affects kidneys; mutagenic data-RTECS.

Teratogenicity:

Reproductive:

Mutagenicity

Neurotoxicity

Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 1303-96-4 is listed on the TSCA Inventory.

CAS# 1310-73-2 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ)

CAS# 1310-73-2: final RQ = 1000 pounds (454 kg)



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CERCLA/SARA Section 313

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

US State

State Right to Know

Borates, tetra, sodium salts, decahydrate can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Sodium hydroxide can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations

European/International Regulations

Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 1303-96-4 is listed on Canada's DSL List.

CAS# 1310-73-2 is listed on Canada's DSL List.

Canada Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 1303-96-4 is listed on Canada's Ingredient Disclosure List.

CAS# 1310-73-2 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: October 21, 1997

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