



Material Safety Data Sheet  
Sodium tetraborate decahydrate

MSDS# 21010

### Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium tetraborate decahydrate

Catalog Numbers: AC205950000, AC205950010, AC205950050, AC419450000, AC419450010, AC419450250, AC419450250, AC419460000, AC419460010, B80, BP175-500, NC9522673, NC9821542, S246-12, S246-212, S246-250LB, S246-500, S248-10, S248-3, S248-500, S249-500, S249-500LC

Synonyms: Borax; Sodium borate decahydrate; Disodium tetraborate decahydrate.

Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

### Section 2 - Composition, Information on Ingredients

CAS#: 1303-96-4

Chemical Name: Sodium tetraborate decahydrate

%: >99

EINECS#: unlisted

Hazard Symbols: T



Risk Phrases: 60 61

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Warning! May cause harm to the unborn child. May impair fertility. Causes eye, skin, and respiratory tract irritation. Target Organs: Respiratory system, eyes, reproductive system, skin.

#### Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation.

Ingestion: May cause irritation of the digestive tract. Human fatalities have been reported from acute poisoning.

Inhalation: Causes respiratory tract irritation.

Chronic: Chronic exposure may cause reproductive disorders and teratogenic effects.

### Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water.

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If

Inhalation: breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician: Treat symptomatically and supportively.

#### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Runoff from fire control or dilution water may cause pollution.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 2; flammability: 0; instability: 0;

#### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

#### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

#### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium tetraborate decahydrate	2 mg/m3 (inhalable fraction, listed under Borate compounds, inorganic); 6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic)	5 mg/m3 TWA	none listed

OSHA Vacated PELs: Sodium tetraborate decahydrate: 10 mg/m3 TWA

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

#### Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: white

Odor: odorless

pH: 9.5 (5% aq soln)

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 1575 deg C ( 2,867.00°F)

Freezing/Melting Point: 741 deg C ( 1,365.80°F)

Decomposition Temperature: Not available

Solubility in water: soluble

Specific Gravity/Density: 1.7300g/cm3

Molecular Formula: B4Na2O7.10H2O

Molecular Weight: 381.36

#### Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Dust generation.

Incompatibilities with Other Materials: Strong acids, metallic salts, alkaloid salts.

Hazardous Decomposition Products: Oxides of boron.

Hazardous Polymerization: Will not occur.

#### Section 11 - Toxicological Information

RTECS#: CAS# 1303-96-4: VZ2275000

RTECS:

LD50/LC50: CAS# 1303-96-4: Oral, mouse: LD50 = 2 gm/kg;  
Oral, rat: LD50 = 2660 mg/kg;

Carcinogenicity: Sodium tetraborate decahydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

#### Section 12 - Ecological Information

Not available

#### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - Transport Information

US DOT

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 61 May cause harm to the unborn child.

R 60 May impair fertility.

Safety Phrases:

S 53 Avoid exposure - obtain special instructions before use.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 1303-96-4: 1

Canada

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

Canadian WHMIS Classifications: D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

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

US Federal

TSCA

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

**REVIEWED**

Section 16 - Other Information

MSDS Creation Date: 7/06/1999

Revision #9 Date 7/20/2009

DATE: July 16/2012

*Crutcherford*

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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