

MSDS • Sodium Tetraborate

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SECTION 1: NAME & HAZARD SUMMARY

Material Name: Sodium Tetraborate Decahydrate

Synonyms: Buffer Salt pH 9.18; Borax, Sodium Borate Decahydrate

Hazard summary (as defined by OSHA Hazard Comm. Std., 29 CFR 1910.1200):

Physical hazards: None (see Section 5)

Health hazards: Based on MDI - may cause irritation (eye, skin, respiratory passages, skin) inhalation (respiratory sensitizer, lung injury).

Read the entire MSDS for a more thorough evaluation of the hazards.

SECTION 2: INGREDIENTS

	%	OSHA PEL
Sodium Tetraborate Decahydrate CAS# 1303-96-4	100	Not Listed

Values are not product specifications.

SECTION 3: PHYSICAL DATA

Physical State: Solid

Appearance: white

Odor: Not available.

pH: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Reactivity: 0

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 1575 deg C @ 760.00mm Hg

Freezing/Melting Point: 320 deg C

Autoignition Temperature: Not available.

Flash Point: Not available.

Decomposition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

Solubility: soluble

Specific Gravity/Density: 1.7300g/cm³

Molecular Formula: B₄Na₂O₇·10H₂O

Molecular Weight: 381.36



SECTION 4: FIRE AND EXPLOSION HAZARD DATA

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 agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Special fire fighting protective equipment: None

Unusual fire and explosion hazards: None

SECTION 5: STABILITY AND REACTIVITY DATA

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

Conditions to Avoid: Incompatible materials, dust generation, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.

Hazardous Decomposition Products: Irritating and toxic fumes and gases, oxides of boron.

Hazardous Polymerization: Will not occur.

SECTION 6: HEALTH HAZARD ASSESSMENT

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 soap and 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.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician: Treat symptomatically and supportively.

This data strongly indicates the need for increased emphasis on skin protection.

SECTION 7 SPILL, LEAK AND WASTE DISPOSAL INFORMATION

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.

Handling:

Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not breathe dust, vapor, mist, or gas. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:

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

SECTION 8 SPECIAL PROTECTION INFORMATION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits for Sodium Tetraborate Decahydrate

1 mg/m³ TWA (anhydrous); 5 mg/m³ TWA (decahydrate); 1 mg/m³ TWA (pentahydrate)
5 mg/m³ TWA none listed

OSHA Vacated PELs:

Sodium Tetraborate Decahydrate: 10 mg/m³ TWA

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 a respirator's use.

Eyewash station and safety shower in work area.

SECTION 9 TOXICOLOGY

RTECS#:

CAS# 1303-96-4: VZ2275000

LD50/LC50:

Oral, mouse: LD50 = 2 gm/kg;

Oral, rat: LD50 = 2660 mg/kg;

Carcinogenicity:

CAS# 1303-96-4: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: See actual entry in RTECS for complete information.

SECTION 10 REGULATORY INFORMATION

US FEDERAL

TSCA

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

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 1303-96-4: chronic.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 1303-96-4 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. California No Significant Risk Level: None of the chemicals in this product are listed.

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