


Sodium Tetraborate Decahydrate		Pricing >
Linear Formula	Na ₂ B ₄ O ₇ • 10H ₂ O	
Pubchem CID	16211214	
MDL Number	MFCD00149193	
EC No.	215-540-4	
IUPAC Name	disodium; 3,7-dioxido-2,4,6,8,9-pentaoxa-1,3,5, 7-tetraborabicyclo [3.3.1]nonane; decahydrate	
Beilstein/Reaxys No.	N/A	
SMILES	[Na+].[Na+].[O-]B1OB2OB([O-])OB(O1)O2.O.O.O.O.O.O.O.O.O.O	
Inchl Identifier	InChI=1S/B4O7.2Na.10H2O/c5-1-7-3-9-2(6)10-4(8-1)11-3;...../h;...;10*1H2/q-2;2*+1;.....	
Inchl Key	CDMADVZSLOHIFP-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H360FD	
Hazard Codes	T	
Precautionary Statements	P201-P280-P308 + P313	
Risk Codes	60-61	
Safety Statements	53-45	
RTECS Number	VZ2275000	
Transport Information	N/A	
WGK Germany	1	
GHS Pictograms	GHS08 Health Hazard 	

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SAFETY DATA SHEET

Date Accessed: 05/02/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #1303-96-4

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements

10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Reproductive toxicity (Category 2), H361
GHS Label elements, including precautionary statements
Pictogram



Signal word: Warning
Hazard statement(s)
H361 Suspected of damaging fertility or the unborn child.
Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.
Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
Synonyms :
Boraxdecahydrate
Sodium boratedecahydrate
Formula : $\text{B}_4\text{Na}_2\text{O}_7 \cdot 10\text{H}_2\text{O}$
Molecular weight : 381.37 g/mol
CAS-No. : 1303-96-4
EC-No. : 215-540-4

SECTION 4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust.
Sweep up and shovel. Keep in suitable, closed containers for disposal.
Reference to other sections
For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment
Eye/face protection
Safety glasses with side-shields conforming to EN166
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves

after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Form: crystalline

Colour: white

Odour odourless

Odour Threshold No data available

pH 9.2 at 10 g/l

Melting point/freezing point

62 °C (144 °F)

Initial boiling point and boiling range

Decomposes below the boiling point.

Flash point No data available

Evaporation rate No data available

Flammability (solid, gas) The product is not flammable.

Upper/lower flammability or explosive limits

No data available

Vapour pressure No data available

Vapour density No data available

Relative density 1.73 g/cm³ at 25 °C (77 °F)

Water solubility 38.1 g/l at 20 °C (68 °F) - completely soluble

Partition coefficient: octanol/water log Pow: -1.53

Auto-ignition temperature

No data available

Decomposition temperature

No data available

Viscosity No data available

Explosive properties No data available

Oxidizing properties No data available

Other safety information
No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity
No data available
Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
No data available
Conditions to avoid
No data available
Incompatible materials
Strong oxidizing agents, Strong reducing agents
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Borane/boron oxides, Sodium oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 4,500 - 5,000 mg/kg
LC50 Inhalation - Rat - 4 h - > 2.04 mg/l
(OECD Test Guideline 403)
Dermal: No data available
No data available
Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
Serious eye damage/eye irritation
Eyes - Rabbit
Result: Moderate eye irritation
(OECD Test Guideline 405)
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
No data available
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

fetotoxicity

Presumed human reproductive toxicant

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: VZ2275000

Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid dust and sodium borate dust. A recent epidemiological study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

No data available

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 1,085 - 1,402 mg/l - 48 h

Toxicity to algae IC50 - Desmodesmus subspicatus (green algae) - 158 mg/l - 96 h

Persistence and degradability

No data available

Bioaccumulative potential

No bioaccumulation is to be expected ($\log P_{ow} \leq 4$).

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Chronic Health Hazard

Massachusetts Right To Know Components

Disodium tetraborate decahydrate

CAS-No. 1303-96-4

Revision Date

2007-03-01

Pennsylvania Right To Know Components

Disodium tetraborate decahydrate

CAS-No. 1303-96-4

Revision Date

2007-03-01

New Jersey Right To Know Components

Disodium tetraborate decahydrate

CAS-No. 1303-96-4

Revision Date

2007-03-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.
