

1 Identification

Product identifier

Product name: Sodium tetraborate, anhydrous

Stock number: 10875

CAS Number:

1330-43-4

EC number:

215-540-4

Index number:

005-011-00-4

Relevant identified uses of the substance or mixture and uses advised against.

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar

Thermo Fisher Scientific Chemicals, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.

Hazards not otherwise classified No information known.

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS08

Signal word

Danger

Hazard statements

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.

P202 Do not handle until all safety precautions have been read and understood.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D2A - Very toxic material causing other toxic effects



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1	Health (acute effects) = 1
FIRE	0	Flammability = 0
REACTIVITY	1	Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description:

1330-43-4 Sodium tetraborate, anhydrous

Concentration: ≤100%

Identification number(s):

EC number: 215-540-4

Index number: 005-011-00-4

4 First-aid measures

Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

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After skin contact

Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed May damage fertility or the unborn child.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Sodium oxide

Boron oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions: Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to section 13.

Prevention of secondary hazards: No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1: 6 mg/m³

PAC-2: 88 mg/m³

PAC-3: 530 mg/m³

7 Handling and storage

Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and fires: The product is not flammable

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Store away from water/moisture.

Store away from reducing agents.

Further information about storage conditions:

Store under dry inert gas.

This product is hygroscopic.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and water.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

1330-43-4 Sodium tetraborate, anhydrous (100.0%)

REL (USA) Long-term value: 1 mg/m³
anhydrous

TLV (USA) Short-term value: 6* mg/m³
Long-term value: 2* mg/m³
*as inhalable fraction

EL (Canada) Short-term value: 6 mg/m³
Long-term value: 2 mg/m³

EV (Canada) Short-term value: 6 mg/m³
Long-term value: 2 mg/m³
inorganic, inhalable

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

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USA

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Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.
Material of gloves: Nitrile rubber, NBR
Eye protection: Safety glasses with side shields / NIOSH (US) or EN 166(EU)
Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Powder
Odor: Odorless
Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: 741 °C (1366 °F)
Boiling point/Boiling range: 1575 °C (2867 °F) (dec)
Sublimation temperature / start: Not determined
Flammability (solid, gaseous): Not determined.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.

Danger of explosion:

Explosion limits: Not determined.
Lower: Not determined
Upper: Not determined
Vapor pressure at 20 °C (68 °F): 0 hPa
Density at 20 °C (68 °F): 2.367 g/cm³ (19.753 lbs/gal)
Relative density: Not determined.
Vapor density: Not determined.
Evaporation rate: Not determined.
Solubility in / Miscibility with
Water at 40 °C (104 °F): 87.9 g/l
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not determined.
kinematic: Not determined.
Other information: No further relevant information available.

10 Stability and reactivity

Reactivity: No information known.
Chemical stability: Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions: No dangerous reactions known
Conditions to avoid: No further relevant information available.
Incompatible materials:
Reducing agents
Water/moisture
Hazardous decomposition products:
Sodium oxide
Boron oxide

11 Toxicological information

Information on toxicological effects

Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

Oral LD50 1200 mg/kg (rat)

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

EPA-I: Data are inadequate for an assessment of human carcinogenic potential.

ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Reproductive toxicity:

May damage fertility or the unborn child.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

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USA

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Additional ecological information:

General notes:

Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number

DOT, ADN, IMDG, IATA Not applicable

UN proper shipping name

DOT, ADR, ADN, IMDG, IATA Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA Not applicable

Class

Not applicable

Packing group

DOT, ADR, IMDG, IATA Not applicable

Environmental hazards: Not applicable.

Special precautions for user Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:

DOT

Marine Pollutant (DOT): No

UN "Model Regulation": Not applicable

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS08

Signal word Danger

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National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings) Substance is not listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

This substance is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH).

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Date of preparation/Revision: Print date, revision date and version number are in the header of each page.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

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USA

Product name: Sodium tetraborate, anhydrous

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WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)
Repr. 1B: Reproductive toxicity – Category 1B

USA