

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : Sodium tetraborate decahydrate

Product Number : S9640

Brand : Sigma-Aldrich

Company : Sigma-Aldrich
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2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

May impair fertility. May cause harm to the unborn child.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Boraxdecahydrate
Sodium boratedecahydrate

Formula : $B_4Na_2O_7 \cdot 10H_2O$

Molecular Weight : 381,37 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
Disodium tetraborate decahydrate				
1303-96-4	215-540-4	005-011-01-1	T, R60 - R61	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

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

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

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

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid exposure - obtain special instructions before use. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (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).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Safety glasses with side-shields conforming to EN166

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form crystalline

Colour white

Safety data

pH	9,2 at 10 g/l
Melting point	62 °C
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	1,73 g/mL at 25 °C
Water solubility	38,1 g/l at 20 °C - completely soluble

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents, Strong reducing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Borane/boron oxides, Sodium oxides

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 4.500 - 5.000 mg/kg

LD50 Dermal - rabbit - 10.000 mg/kg

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

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.

fetotoxicity

Presumed human reproductive toxicant

Signs and Symptoms of Exposure

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.

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.

Additional Information
RTECS: VZ2275000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish	LC50 - Carassius auratus (goldfish) - 178 mg/l - 72 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 1.085 - 1.402 mg/l - 48 h
Toxicity to algae	IC50 - Scenedesmus subspicatus - 158 mg/l - 96 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

Labelling according to EC Directives

EC Label

Hazard symbols

T Toxic

R-phrases(s)

R60 May impair fertility.
R61 May cause harm to the unborn child.

S-phrases(s)

S53 Avoid exposure - obtain special instructions before use.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the

label where possible).

Restricted to professional users.

16. OTHER INFORMATION

Further information

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