

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Sodium borohydride
Product Number : S9125
Brand : Sigma
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +18003255832
Fax : +18003255052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : NaBH₄
Molecular Weight : 37.83 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Sodium borohydride			
16940-66-2	241-004-4	-	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Water Reactive, Toxic by ingestion, Toxic by skin absorption, Corrosive

HMIS Classification

Health Hazard: 3
Flammability: 3
Physical hazards: 2

NFPA Rating

Health Hazard: 3
Fire: 0
Reactivity Hazard: 2
Special hazard.: W

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin Toxic if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion Toxic if swallowed. Causes burns.

4. 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point no data available

Ignition temperature no data available

Suitable extinguishing media

Carbon dioxide (CO2) Dry powder

Extinguishing media which shall not be used for safety reasons

Water

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. 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. Do not flush with water. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

Storage

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

Never allow product to get in contact with water during storage.

Air and moisture sensitive. Store under inert gas. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

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. 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

Handle with gloves.

Eye protection

Safety glasses

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	powder
Colour	white

Safety data

pH	no data available
Melting point	ca.400 °C (752 °F)
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	3.02 %(V)
Water solubility	55 g/l at 25 °C (77 °F) - soluble

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

Materials to avoid

Oxidizing agents, Chemically active metals, acids, Reacts violently with water.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 162 mg/kg

LD50 Dermal - rabbit - 230 mg/kg

Irritation and corrosion

Skin - Human - Corrosive

Eyes - Human - Corrosive

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.

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

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.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin Toxic if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Ingestion Toxic if swallowed. Causes burns.

Additional Information

RTECS: ED3325000

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

Toxicity to fish mortality LC50 - Gambusia affinis (Mosquito fish) - 5,600 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

DOT (US)

UN-Number: 1426 Class: 4.3 Packing group: I

Proper shipping name: Sodium borohydride

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 1426 Class: 4.3 Packing group: I EMS-No: F-G, S-O

Proper shipping name: SODIUM BOROHYDRIDE

Marine pollutant: No

IATA

UN-Number: 1426 Class: 4.3 Packing group: I

Proper shipping name: Sodium borohydride

IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards

Water Reactive, Toxic by ingestion, Toxic by skin absorption, Corrosive

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

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

SARA 313 Components

SARA 313: 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

Reactivity Hazard, Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Sodium borohydride

CAS-No.
16940-66-2

Revision Date
2007-03-01

New Jersey Right To Know Components

Sodium borohydride

CAS-No.
16940-66-2

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, or any other reproductive defects.

16. OTHER INFORMATION

Further information

Copyright 2009 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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. Sigma-Aldrich Co., 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.