RADCHEM

LABORATORY CHEMICALS AND CONSUMABLES

# MATERIAL SAFETY DATA SHEET

## SODIUM BOROHYDRIDE

### 1. Chemical Product and Company information.

**Product name:** Sodium Borohydride

**Contact Information:**
Radchem cc
PO Box 166982
Brackendowns
Alberton 1454
Telephone : **011 867 3726 / 2864**

### 2. Hazard Identification

Extremely hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Very hazardous in case of skin contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastrointestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

### 3. Composition / information on ingredients

**CAS #:** 16940-66-2

**Synonym:** Sodium tetrahydroborate

**Chemical Name:** Not available

**Chemical Formula:** NaBH4

### 4. First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

**Skin Contact:** If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before

reusing.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

**Ingestion:** Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available

## 5. Fire-fighting measures

**Flammability of the Product:** Flammable

**Fire Hazards in Presence of Various Substances:** Not available

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosion.

**Special Remarks on Fire Hazards:** Not available

**Special Remarks on Explosion Hazards:** Not available

## 6. Accidental release measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:** Corrosive solid. Flammable solid that, in contact with water, emits flammable gases. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Cover with dry earth, sand or other non-combustible material. Use water spray to reduce vapours. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

## 7. Handling and storage

**Precautions:** Keep locked up Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents, acids, alkalis, moisture.

**Storage:** Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

## 8. Exposure controls/personal protection

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Splash goggles. Lab coat. Vapour and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Vapour and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

## 9. Physical and chemical properties

**Physical state and appearance:** Solid

**Odour:** Not available

**Taste:** Not available

**Colour:** White / Greyish white

**Boiling Point:** Not available

**Melting Point:** Decomposes

**Critical Temperature:** Not available

**Specific Gravity:** 1.074 (Water = 1)

**Vapour Density:** 1.3 (Air = 1)

**Volatility:** Not available

**Odour Threshold:** Not available

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water

**Solubility:** Easily soluble in cold water

## 10. Stability and reactivity

**Stability:** The product is stable

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available

**Incompatibility with various substances:** Extremely reactive or incompatible with oxidizing agents, acids, alkalis, moisture. The product reacts violently with water to emit flammable but non toxic gases.

**Corrosivity:** Non-corrosive in presence of glass

**Special Remarks on Reactivity:** Not available

**Special Remarks on Corrosivity:** Not available

**Polymerization:** Will not occur.

## 11. Toxicological information

**Routes of Entry:** Eye contact. Inhalation. Ingestion

**Toxicity to Animals:** Acute oral toxicity (LD50): 160 mg/kg [Rat].

**Chronic Effects on Humans:** Not available

**Other Toxic Effects on Humans:** Extremely hazardous in case of skin contact (irritant), of ingestion, of inhalation. Very hazardous in case of skin contact (corrosive).

**Special Remarks on Toxicity to Animals**: Not available

**Special Remarks on Chronic Effects on Humans:** Not available

**Special Remarks on other Toxic Effects on Humans:** Not available

## 12. Ecological information

**Ecotoxicity:** Not available

**BOD5 and COD:** Not available

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are as toxic as the original product.

**Special Remarks on the Products of Biodegradation:** Not available

## 13. Disposal considerations

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## 14. Transport information

**DOT Classification:** CLASS 4.3: Material that emits flammable gases on contact with water.

**Identification:** : Sodium borohydride : UN1426 PG: I

**Special Provisions for Transport:** Not applicable