POTASSIUM BOROHYDRIDE
CAS NO 13762-51-1

MATERIAL SAFETY DATA SHEET
SDS/MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product name: Potassium Borohydride
CAS-No.: 13762-51-1

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company: Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi -110002
INDIA
Telephone: +91 11 49404040
Email: care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Substances, which in contact with water, emit flammable gases (Category 1), H260
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Dermal (Category 3), H311
Skin corrosion (Category 1B), H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word: Danger

Hazard statement(s)
H260 In contact with water releases flammable gases which may ignite spontaneously.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
Precautionary statement(s)
P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231 + P232 Handle under inert gas. Protect from moisture.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P422 Store contents under inert gas.

Supplemental Hazard information (EU)
EUH014 Reacts violently with water.

2.3 Other hazards
Reacts violently with water.

SECTION 3: Composition/information on ingredients

3.1 Mixtures
Formula : KBH₄
Molecular weight : 53.94 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium tetrahydroborate</td>
<td>Water-react. 1; Acute Tox. 3; Skin Corr. 1B; H260, H301, H311, H314</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

CAS-No. 13762-51-1
EC-No. 237-360-5

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of 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
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
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.

4.2 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.

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Dry powder
5.2 **Special hazards arising from the substance or mixture**  
Nature of decomposition products not known.

5.3 **Advice for firefighters**  
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 **Further information**  
No data available

SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**  
Wear respiratory protection. 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.

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

6.3 **Methods and materials for containment and cleaning up**  
Sweep up and shovel.\(\text{\textcopyright}\) Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 **Reference to other sections**  
For disposal see section 13.

SECTION 7: Handling and storage

7.1 **Precautions for safe 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. For precautions see section 2.2.

7.2 **Conditions for safe storage, including any incompatibilities**  
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage.  
Store under inert gas.  
Storage class (TRGS 510): Solid substances which give off flammable gases in contact with water

7.3 **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

8.1 **Control parameters**

8.2 **Exposure controls**

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

**Personal protective equipment**

**Eye/face protection**  
Face shield and safety glasses 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**
Complete suit protecting against chemicals, Flame retardant protective 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 (EN 143) respirator cartridges as a backup to engineering controls. If th 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**

### 9.1 Information on basic physical and chemical properties

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Appearance</td>
<td>Form: powder&lt;br&gt;Colour: white</td>
</tr>
<tr>
<td>b) Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>No data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>Melting point/range: 500 °C - lit.</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>k) Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>1.18 g/mL at 25 °C</td>
</tr>
<tr>
<td>n) Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>o) Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>p) Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>q) Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>r) Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>s) Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>t) Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 9.2 Other safety information
No data available
SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Reacts violently with water.

10.4 Conditions to avoid
Exposure to moisture

10.5 Incompatible materials
Strong oxidizing agents, Acids, Alcohols, Strong bases

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 167 mg/kg(Potassium tetrahydroborate)

LC50 Inhalation - Rat - 46 mg/l(Potassium tetrahydroborate)

LD50 Dermal - Rabbit - 230 mg/kg(Potassium tetrahydroborate)

LD50 Subcutaneous - Rat - 184 mg/kg(Potassium tetrahydroborate)

Skin corrosion/irritation
No data available(Potassium tetrahydroborate)

Serious eye damage/eye irritation
No data available(Potassium tetrahydroborate)

Respiratory or skin sensitisation
No data available(Potassium tetrahydroborate)

Germ cell mutagenicity
No data available(Potassium tetrahydroborate)

Carcinogenicity
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.

Reproductive toxicity
No data available(Potassium tetrahydroborate)

Specific target organ toxicity - single exposure
No data available(Potassium tetrahydroborate)
Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available(Potassium tetrahydroborate)

Additional Information
RTECS: TS7525000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Inhalation may provoke the following symptoms:, spasm, inflammation and edema of the bronchi, spasm, inflammation and edema of the larynx, pulmonary edema, Aspiration or inhalation may cause chemical pneumonitis., Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Potassium tetrahydroborate)

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Potassium tetrahydroborate)

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1870 IMDG: 1870 IATA: 1870

14.2 UN proper shipping name
ADR/RID: POTASSIUM BOROHYDRIDE IMDG: POTASSIUM BOROHYDRIDE IATA: Potassium borohydride

Passenger Aircraft: Not permitted for transport

14.3 Transport hazard class(es)
ADR/RID: 4.3 IMDG: 4.3 IATA: 4.3

14.4 Packaging group
ADR/RID: I IMDG: I IATA: I
14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

EUH014 Reacts violently with water.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.

Further information
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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.