



## MATERIAL SAFETY DATA SHEETS

21

Aluminium borohydride

### 1. CHEMICAL IDENTITY

**Chemical Name :** Aluminium borohydride

**Chemical Classification:** Explosive, Flammable **Trade Name :**

**Synonyms:** Aluminium tetrahydroborate, Borate(1-), tetrahydro-, aluminium (3:1),

**Formula :** AIB3H12

**CAS No:** 16962-07-5 **UN No:** 2870

#### Regulated Identification

**Shipping Name :**

**Hazchem Code :** 4W

**Codes / Label :** Class 4.2, Explosive,  
Flammable

**Hazardous Waste ID No :**

| HAZARDOUS INGREDIENTS   | C.A.S. No. | HAZARDOUS INGREDIENTS | C.A.S. No. |
|-------------------------|------------|-----------------------|------------|
| 1 Aluminium borohydride | 16962-07-5 | 3                     |            |
| 2                       |            | 4                     |            |

### 2. PHYSICAL / CHEMICAL DATA

**Boiling Pt. °C:** 44.5

**Physical State:** Liquid

**Appearance:** A clear, colourless liquid.

**Melting Pt °C:** -64.5

**Vapour Pressure @ 35°C mmHg:**

**Odour:**

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

**Solubility in water at 30°C g/100ml:**

Reacts violently

**Others:**

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

**pH :**

### 3. FIRE / EXPLOSION HAZARD DATA

**Flammability :** Yes

**LEL:**

**Flash Point °C in OC:**

**TDG Flammability:**

**UEL:**

**Flash Point °C in CC:**

**Autoignition Temperature °C :**

**Explosion sensitivity to impact:**

**Explosion sensitivity to static Electricity:**

**Hazardous Combustion Products :** Fire will produce irritating, corrosive and/or toxic gases.

**Hazardous Polymerization :**

**Combustible Liquid:** Yes

**Explosive Material:**

**Corrosive Material**

**Flammable Material:** Yes

**Oxidiser :**

**Others:**

**Pyrophoric Material:**

**Organic Peroxide :**

### 4. REACTIVITY DATA

**Chemical Stability :** Spontaneously combustible. Dangerous when wet. Ignites in air.

**Incompatibility with other material :** Incompatible with acids, alcohols, amines, and aldehydes Reacts with alkenes and in the presence of oxygen, combustion is initiated even in the absence of moisture

**Reactivity :** Reacts rapidly and dangerously with oxygen and with other oxidizing agents, even weak ones

**Hazardous** :  
**Reaction Products**

## 5. HEALTH HAZARD DATA

**Routes of entry:** Inhalation, ingestion, skin and eyes

### Effects of Exposure / Symptoms:

Inhalation : Inhalation of decomposition products may cause severe injury or death. Ingestion, eyes and skin : Contact with substance may cause severe burns.

### Emergency Treatment :

**Inhalation:** Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

**Skin:** Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush with running water for at least 20 minutes.

**Eyes:** In case of contact with substance, immediately flush with running water for at least 20 minutes.

**Ingestion:** Seek medical assistance.

**LD50 (oral-rat) mg/kg:**

**STEL:**

**LC50 (rat) mg/kg:**

**Odour Threshold:**

**Permissible  
Exposure Limit:**

**TLV (ACGIH) :**

| NFPA Hazard | Health | Flammability | Reactivity | Special |
|-------------|--------|--------------|------------|---------|
| Signals     |        | 3            | 2          |         |

## 6. PREVENTIVE MEASURES

**Personal Protective :** Wear appropriate protective gloves, clothing and goggles.

### Equipment

**Handling** : All chemicals should be considered hazardous. Avoid direct physical contact. Use appropriate, approved safety equipment. Untrained individuals should not handle this chemical or its container. Handling should occur in a chemical fume hood.

**Storage** : Keep in a cool, dry, dark location in a tightly sealed container or cylinder. Keep away from incompatible materials, ignition sources and untrained individuals. Secure and label area. Protect containers/cylinders from physical damage.

**Precautions** :

## 7. EMERGENCY / FIRST AID MEASURES

### FIRE:

**Fire Extinguishing Media :** Do not use water. Use graphite, soda ash, powdered sodium chloride, or suitable dry powder.

**Special Procedure** : If fire is massive, back off, protect surroundings, and let burn. Keep run-off water out of sewers and water sources.

**Unusual Hazards** :

### EXPOSURE: First Aid Measures:

**Inhalation:** Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

**Skin:** Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush with running water for at least 20 minutes.

**Eyes:** In case of contact with substance, immediately flush with running water for at least 20 minutes.

**Ingestion:** Seek medical assistance.

**Antidotes / Dosages:**

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**SPILLS :**

**Steps To Be Taken** : Do not use water. Cover all suspected material with dry sand or earth to prevent ignition until material can be permanently disposed off.  
Land spill: Dig a pit, pond, lagoon, holding area to contain liquid or solid material. Cover solid with plastic.

**Waste Disposal Method:**

**8. ADDITIONAL INFORMATION / REFERENCES**

**9. MANUFACTURERS / SUPPLIERS DATA**

|                                |                                  |
|--------------------------------|----------------------------------|
| <b>NAME OF FIRM :</b>          | <b>Contact person</b>            |
| <b>MAILING ADDRESS :</b>       | <b>in Emergency :</b>            |
| <b>TELEPHONE / TELEX NOS :</b> | <b>Local Bodies involved :</b>   |
| <b>TELEGRAPHIC ADDRESS :</b>   | <b>Standard Packing :</b>        |
| <b>OTHERS :</b>                | <b>Trem Card Details / Ref :</b> |

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