Aluminate(1-), dihydrobis[2-(methoxy-kO)ethanolato-kO]-, sodium (1:1) (cas 22722-98-1) MSDS

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

   Product name : Red-Al? sodium bis(2-methoxyethoxy)aluminum hydride solution

2. HAZARDS IDENTIFICATION

   Classification of the substance or mixture

   According to Regulation (EC) No1272/2008
   Flammable liquids (Category 2)
   Acute toxicity, Inhalation (Category 3)
   Acute toxicity, Dermal (Category 3)
   Acute toxicity, Oral (Category 3)
   Skin irritation (Category 2)
   Reproductive toxicity (Category 2)
   Specific target organ toxicity - single exposure (Category 3)
   Specific target organ toxicity - repeated exposure (Category 2)
   Aspiration hazard (Category 1)

   Highly flammable. Contact with water liberates extremely flammable gases. Causes burns. Harmful: may cause lung damage if swallowed. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Reacts violently with water. Vapours may cause drowsiness and dizziness.

   Label elements

   Pictogram

   Signal word : Danger

   Hazard statement(s)

   H225 Highly flammable liquid and vapour.
   H301 Toxic if swallowed.
   H304 May be fatal if swallowed and enters airways.
   H311 Toxic in contact with skin.
   H315 Causes skin irritation.
   H331 Toxic if inhaled.
   H36 May cause drowsiness or dizziness.
   H316d Suspected of damaging the unborn child.
   H373 May cause damage to organs through prolonged or repeated exposure.

   Precautionary statement(s)

   P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
   P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
   P280 Wear protective gloves/protective clothing.
   P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
   P311 Call a POISON CENTER or doctor/physician.
   P331 Do NOT induce vomiting.

   Hazard symbol(s)

   F Highly flammable
   C Corrosive

   R-phrase(s)

   R11 Highly flammable.
   R14/15 Reacts violently with water, liberating extremely flammable gases.
Reacts violently with water, liberating extremely flammable gases. Causes burns. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness.

Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Other hazards - none

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms**
- Vitride®, Sodium bis(2-methoxyethoxy) aluminum hydride solution SBAH
- Sodium dihydrido-bis(2-methoxyethoxy)aluminate
- Sodium bis(2-methoxyethoxy)aluminum dihydride

**Formula**: C6H16AlNaO4

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>22722-98-1</td>
<td>245-178-2</td>
<td>- F, C, R14/15 - R34</td>
<td>&gt;= 65 - &lt;= 70 %</td>
</tr>
<tr>
<td>108-88-3</td>
<td>203-625-9</td>
<td>- Flam. Liq. 2; Repr. 2; Asp. Tox. 1; STOT RE 2; Skin Irrit. 2; STOT SE 3; H225, H315, H373, H304, H336, H361d F, Xn, Repr.Cat.3, R11 - R38 - R48/20 - R63 - R65 - R67</td>
<td>&gt;= 30 - &lt;= 35 %</td>
</tr>
</tbody>
</table>

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

### 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**
Take off contaminated clothing and shoes immediately. 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**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIRE-FIGHTING MEASURES

**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 breathing vapors, mist or gas. Ensure adequate ventilation.  
Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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

Methods and materials for containment and cleaning up  
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling  
Avoid inhalation of vapour or mist.  
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage  
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

Personal protective equipment  
Respiratory protection  
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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  
Tightly fitting safety goggles. Faceshield (8-inch minimum).

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

Hygiene measures  
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance  
Form liquid

Colour light yellow

Safety data  
$pH$ no data available
10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Reacts violently with water.

Conditions to avoid
Heat, flames and sparks. Exposure to moisture.

Materials to avoid
Water, Oxidizing agents, Combustible material

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - hydrogen gas, Carbon oxides, Aluminum oxide, Sodium oxides
Reacts with water to form: - Hydrogen gas

Thermal decomposition
205 °C

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - > 50 mg/kg
LD50 Dermal - rabbit - > 200 mg/kg

Skin corrosion/irritation
Skin - rabbit - Severe skin irritation

Serious eye damage/eye irritation
Eyes: no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

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

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
Potential health effects

Inhalation
Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Vapours may cause drowsiness and dizziness.

Ingestion
May be harmful if swallowed. Causes burns. Aspiration hazard if swallowed - can enter lungs and cause damage.

Skin
May be harmful if absorbed through skin. Causes skin burns.

Eyes
Causes eye burns.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: no data available

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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

ADRRID
UN-Number: 3399 Class: 4.3 (3) Packing group: I
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Sodium dihydridobis(2-methoxyethanolato)aluminate(1-))

IMDG
UN-Number: 3399 Class: 4.3 (3) Packing group: I EMS-No: F-G, S-N
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Sodium dihydridobis(2-methoxyethanolato)aluminate(1-))
Marine pollutant: No

IATA
UN-Number: 3399 Class: 4.3 (3) Packing group: I
Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (Sodium dihydridobis(2-methoxyethanolato)aluminate(1-))
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
## 16. OTHER INFORMATION

### Text of H-code(s) and R-phrase(s) mentioned in Section 3

<table>
<thead>
<tr>
<th>H-code</th>
<th>R-phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asp. Tox.</td>
<td>Aspiration hazard</td>
<td></td>
</tr>
<tr>
<td>Flam. Liq.</td>
<td>Flammable liquids</td>
<td></td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
<td></td>
</tr>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways.</td>
<td></td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness.</td>
<td></td>
</tr>
<tr>
<td>H361d</td>
<td>Suspected of damaging the unborn child.</td>
<td></td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
<td></td>
</tr>
<tr>
<td>Repr.</td>
<td>Reproductive toxicity</td>
<td></td>
</tr>
<tr>
<td>Skin Irrit.</td>
<td>Skin irritation</td>
<td></td>
</tr>
<tr>
<td>STOT RE</td>
<td>Specific target organ toxicity - repeated exposure</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Corrosive</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Highly flammable</td>
<td></td>
</tr>
<tr>
<td>R11</td>
<td>Highly flammable.</td>
<td></td>
</tr>
<tr>
<td>R14/15</td>
<td>Reacts violently with water, liberating extremely flammable gases.</td>
<td></td>
</tr>
<tr>
<td>R34</td>
<td>Causes burns.</td>
<td></td>
</tr>
<tr>
<td>R38</td>
<td>Irritating to skin.</td>
<td></td>
</tr>
<tr>
<td>R48/20</td>
<td>Harmful: danger of serious damage to health by prolonged exposure through inhalation.</td>
<td></td>
</tr>
<tr>
<td>Xn</td>
<td>Harmful</td>
<td></td>
</tr>
<tr>
<td>R63</td>
<td>Possible risk of harm to the unborn child.</td>
<td></td>
</tr>
<tr>
<td>R65</td>
<td>Harmful: may cause lung damage if swallowed.</td>
<td></td>
</tr>
<tr>
<td>R67</td>
<td>Vapours may cause drowsiness and dizziness.</td>
<td></td>
</tr>
</tbody>
</table>

### 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 this document is based on the resent 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. guidechem 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.