SAFETY DATA SHEET
ALUPREM - aluminum trihydrate

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
Product name ALUPREM - aluminum trihydrate
Synonyms, Trade Names All grades of TA, TAB, TAG, TG, TH, THB, THG, TLV, TS, TWT, XL with and without CES, LV, DES, MES, S, SES, SOC, VS modification
REACH Registration number 01-2119529246-39-XXXX
REACH Registration notes mono-constituent substance
CAS-No. 21645-51-2
EC No. 244-492-7

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Pigment
Filler for paint and plastics
Flame retardant
Smoke suppressant in polymers.

Uses advised against Any use other than those identified.

1.3. Details of the supplier of the safety data sheet
Supplier TP&T BV
Burgemeester Moslaan 13
8051 CP Hattem
The Netherlands
Tel: +31-38-33 88 657
Fax: +31-38-444-62-07
info.tpt@torminerals.com

1.4. Emergency telephone number
TP & T BV (Tor Minerals International Inc.) +31-38-33 88 657 / 0031(0)611060679

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Classification (EC 1272/2008, CLP)
Physical and Chemical Hazards Not classified
Human health Not classified
Environment Not classified

Classification (67/548/EEC) Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health: Not a health hazard under normal conditions of use and as delivered. High dust concentrations may cause mechanical irritation of the eyes, skin and respiratory tract.

Environment: The product is not expected to be hazardous to the environment.

Physical and Chemical Hazards: Releases humidity upon decomposition, do not heat in closed containers.

2.2. Label elements
EC No. 244-492-7
Label In Accordance With (EC) No. 1272/2008
No pictogram required.
Precautionary Statements

P261 Avoid breathing dust.
P285 In case of inadequate ventilation wear respiratory protection.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P402 Store in a dry place.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Substance</th>
<th>Content</th>
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<tbody>
<tr>
<td>aluminium hydroxide</td>
<td>&gt;95%</td>
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CAS-No.: 21645-51-2        EC No.: 244-492-7  Registration Number: 01-2119529246-XXXX

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

REACH Registration number 01-2119529246-39-XXXX
REACH Registration notes mono-constituent substance
CAS-No.  21645-51-2
EC No.  244-492-7
Gross Formula  AlH3O3
Ingredient notes All substances contained in this product have been notified to the Classification and Labelling (C&L) Inventory.
Composition Comments This product does not contain any hazardous ingredients, or ingredients with national workplace exposure limits.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion: Rinse mouth thoroughly and give plenty of water to drink. Seek medical advice if necessary.
Skin contact: Clean by mechanical dry removal. Subsequently rinse with water.
Eye contact Immediately flush with plenty of water or eyewash solution for up to 10 minutes. Contact physician if irritation persists.

4.2. Most important symptoms and effects, both acute and delayed

None.

4.3. Indication of any immediate medical attention and special treatment needed

None

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media: The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media: None
5.2. Special hazards arising from the substance or mixture
None.

5.3. Advice for firefighters
None.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective clothing (see Section 8). Avoid inhalation of dust.

6.2. Environmental precautions
No special environmental precautions required.

6.3. Methods and material for containment and cleaning up
Take up mechanically. Dispose of absorbed material in accordance with local regulations.

6.4. Reference to other sections
For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Advise on safe handling: Avoid inhalation of dust and contact with skin and eyes.
Advise on fire and explosion protection: Not applicable.

7.2 Conditions for safe storage, including any incompatibilities
Dry storage at moderate temperatures

7.3. Specific end use(s)
See product information

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>STD</th>
<th>TWA - 8 Hrs</th>
<th>STEL - 15 Min</th>
<th>Notes</th>
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<td>aluminium hydroxide</td>
<td>No std.</td>
<td>No std.</td>
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Ingredient Comments
No exposure limits noted for ingredient(s). COSHH - see note in section 16.

aluminium hydroxide (CAS: 21645-51-2)

<table>
<thead>
<tr>
<th>DNEL</th>
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<td>Industry</td>
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<tr>
<td>Inhalation.</td>
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<tr>
<td>Long Term</td>
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<td>Local Effects</td>
<td>3.59 mg/m3</td>
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<td>Consumer</td>
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<td>Systemic Effects</td>
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<tr>
<td>Freshwater</td>
<td>74.9</td>
<td>µg/l</td>
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<tr>
<td>STP</td>
<td>20</td>
<td>mg/l</td>
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</tbody>
</table>

8.2. Exposure controls
Technical: Avoid dust formation.
Engineering measures: Provide adequate general and local exhaust ventilation.
Respiratory equipment: If ventilation is insufficient, suitable respiratory equipment must be provided.
Hand protection: Wear suitable protective gloves conforming to EN 374.
Eye protection: Wear approved safety goggles.
Other Protection: Provide eyewash station and safety shower.
Hygiene measures: When using do not eat, drink, or smoke.
Environmental: No special exposure controls required.
ALUPREM - aluminum trihydrate

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
Appearance
Power, dust.
Colour
White.
Odour
Odourless.
Solubility
Insoluble.
Initial boiling point and boiling range (°C)
2980°C at 760 mmHg.
Melting point (°C)
decomposes before melting at > 200°C.
Relative density
2.44 @ 20°C.
Solubility Value (G/100G)
0.00009.
(N-Octanol/Water)
Scientifically unjustified.
Explosive properties
non explosive.

9.2. Other information
Particle Size (Micron) variable.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
No specific reactivity hazards associated with this product.

10.2. Chemical stability
Stable under normal conditions of storage and use. See section 7. Dehydrates to aluminium oxide upon heating above 200°C.

10.3. Possibility of hazardous reactions
Not determined.

10.4. Conditions to avoid
Temperatures > 200°C

10.5. Incompatible materials
Materials To Avoid
Strong acids, Bases, alkalis (inorganic).

10.6. Hazardous decomposition products
No hazardous decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Toxic Dose 1 - LD 50 >5000 mg/kg (oral rat)
Toxic Conc. - LC 50 >2.3 mg/l/4h (inh-rat)

Acute Toxicity
Oral LD50 > 2000 mg/kg Rat.
Dermal LD50 Scientifically unjustified.
Inhalation LC50 > 2.3 mg/l (dust/mist) Rat 4 hours

Respiratory or skin sensitisation
Skin sensitisation Guinea pig maximization test (GPMT) Not Sensitising.

Germ cell mutagenicity
Genotoxicity - In Vitro Gene Mutation Negative.
Genotoxicity - In Vivo Chromosome aberration Negative.

Reproductive Toxicity
Reproductive Toxicity - Fertility One-generation study NOAEL 1000 mg/kg/day Oral Rat F1
ALUPREM - aluminum trihydrate

Specific target organ toxicity - repeated exposure

STOT
Respiratory System - Lungs
Inhalation
Ingestion
Skin contact
Eye contact

NOAEL 302 mg/kg Inhalation. Rat.
Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.
Dust may irritate respiratory system or lungs. Fine particles may penetrate the lungs. See note about control of dusts in section 16.
Gastrointestinal symptoms, including upset stomach.
Not a skin sensitizer. Skin irritation is not anticipated when used normally.
Irritating and may cause redness and pain.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity
The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity
Owing to the extremely low solubility in water, the toxic levels could not be reached.

Acute Toxicity
Fish
Aquatic Invertebrates
Aquatic Plants

LC50 96 hours > 100 mg/l Freshwater fish
EC50 48 hours > 100 mg/l Daphnia magna
IC50 72 hours > 100 mg/l Scenedesmus subspicatus

12.2. Persistence and degradability
Degradability
The product solely consists of inorganic compounds which are not biodegradable.

12.3. Bioaccumulative potential
Bioaccumulative potential
The product solely consist of inorganic compounds which are not biodegradable.

12.4. Mobility in soil
Not applicable.

12.5. Results of PBT and vPvB assessment
This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects
Not applicable.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

General
The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number
Not applicable.

14.2. UN proper shipping name
Not applicable
14.3. Transport hazard class(es)

None

14.4. Packing group

Not applicable

14.5. Environmental hazards

None

14.6. Special precautions for user

See section 6 and 8

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No hazardous goods

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Statutory Instruments


Control of Substances Hazardous to Health Regulations (as amended). (COSHH)

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007. (CDG 2009)

Management of Health & Safety at Work Regulations 1999.

Approved Code Of Practice


Guidance Notes

Workplace Exposure Limits EH40/2007 (as amended).

EU Legislation


ADR (L’Accord européen relative au transport international des marchandises dangereuses par route.)

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Information Sources

All data cited from Manufacturer's REACH Registration Dossier.

Revision Comments

Comprehensive revision.

And translated into the language of this document as of the date below.

Revision Date 04-OCT-13

Revision 07

Supersedes date 10-JUN-13

Risk Phrases In Full NC

Not classified.
ALUPREM - aluminum trihydrate

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