1. Identification

Product identifier: ACTIVATED ALUMINA, AMORPHOUS ALUMINA

Other means of identification: FDS-06

Recommended use of the chemical: Refractories, technical ceramics, additive for aluminous cements and other hydraulic setting systems.

Restrictions on use of the chemical: This product should only be used for the indicated uses.

Supplier: ALPHALUM LTDA

Address: Avenida João Pinheiro, 3665, Sala Alopar

Address line 2: Poços de Caldas/MG - Brazil ZIP Code: 37.701-386

Contact phone: +55 (19) 99215-6187

Emergency phone: +55 (19) 99215-6187

2. Hazard identification

Classification of the substance or mixture: Not classified as hazardous according to ABNT NBR 14725-2:2023.

The following statements summarize the health effects normally observed in cases of overexposure. Each user's specific situation must be assessed by a qualified professional. Further information is provided in section 11.

Causes mild eye irritation because it is a particulate material.

May cause mild irritation of the skin and upper respiratory tract.

Ingestion may cause mild irritation.

3. Composition/information on ingredients

Chemical name: Al_2O_3

Percentage: >90.0%

Synonym: Dialuminium trioxide

CAS No.: 1344-28-1

TLV: 5 mg/Nm^3

Composition comments: The full composition is given below and may include some components classified as non-hazardous. The product contains low concentrations of silicon, calcium, magnesium and iron oxides.

4. First-aid measures

Eye contact: Rinse the eyes with plenty of water or saline solution for at least 15 minutes. Seek medical assistance. Seek medical attention. Take this SDS with you.

Skin contact: Wash the skin immediately with plenty of water and soap. Seek medical attention if irritation develops or persists. Take this SDS with you.

Inhalation: Move to fresh air. Check the airways, breathing and pulse. If breathing is difficult, give artificial respiration. Provide cardiopulmonary resuscitation to persons without pulse or breathing. Consult a physician. Take this SDS with you.

Ingestion: If the product is swallowed, rinse the mouth with water. Consult a physician. Take this SDS with you.

5. Firefighting measures

Flammable/combustible properties: The product is not combustible.

Suitable extinguishing media: Fire involving this product is unlikely, but if it occurs it can be controlled with all types of extinguishers.

Unsuitable extinguishing media: None known.

Hazardous decomposition products: No information available.

Protective measures for firefighters: Self-contained breathing apparatus should be provided to firefighters in buildings or confined areas where this product is stored.

Other information: Not available.

6. Accidental release measures

Personal precautions: Avoid dust formation, contact with eyes and skin, and inhalation. Ensure adequate ventilation.

Environmental precautions: No special environmental precautions required.

Spill or leak procedure: Sweep up, collect and place the product in a suitable container for disposal. Use shovels, brooms, buckets or other bulk material handling equipment to place it in the containers.

Evacuation procedure: Not necessary.

Cleaning methods: Clean up in accordance with applicable regulations.

Reference to other sections: See section 13 for waste disposal.

7. Handling and storage

Safe handling: Avoid contact with eyes and skin. Use ventilated areas. Avoid dust formation during handling.

Suitable storage and precautions: Keep in the original, tightly closed packaging in a dry, cool and well-ventilated place. Store in a dry, covered place. Keep the material dry and free from contact with water or any other type of liquid or fluid. Do not allow the material to come into contact with water, as it reacts and produces hydraulic setting.

8. Exposure controls/personal protection

Control parameters: Provide adequate ventilation to comply with the limits set by the Association Advancing Occupational and Environmental Health (ACGIH).

Personal protective measures

- **Eye/face protection:** Panoramic or wide-vision safety glasses with side protection, tested and approved according to current standards.
- **Respiratory protection:** In enclosed, unventilated areas and above the tolerance levels established by ACGIH and NR 15, respiratory protection (PFF1 or P1) is required. Use respirators and components tested and approved under appropriate government standards.
- **Hand protection:** Handle with suitable gloves. The selected protective gloves must meet the specifications of government standards and NR 06.
- **Hygiene measures:** Change clothing that has been in contact with the product; wash hands and face with soap.

Exposure guideline: OSHA PEL: 15 mg/m^3 (TWA – Total Dust). 5 mg/m^3 (TWA – Respirable Fraction)
ACGIH: 10 mg/m^3 (TW – AI)

9. Physical and chemical properties

Appearance / Form: Solid, powder, amorphous.

Odor: Characteristic

Odor threshold: No data available.

Color: White to off-white.

Flash point: Not applicable.

Evaporation rate: Not applicable.

Boiling point: Not applicable.

Melting point: Above 2000°C.

Decomposition temperature: Not applicable.

Flammability (solid, gas): Not applicable.

Auto-ignition temperature: Not applicable.

Vapor pressure: Not applicable.

Vapor density: Not applicable.

Solubility (Water): No data available.

pH: No data available.

Density: No data available.

Bulk density: 0.6 – 1.10 g/cm^3.

Viscosity: Not applicable.

Oxidizing properties: Not applicable.

Partition coefficient (n-octanol): Not applicable.

10. Stability and reactivity

Chemical stability: Stable under normal conditions. Reacts with water.

Precautions: None known.

Incompatible materials: None known.

Hazardous decomposition products: No decomposition into hazardous products occurs.

Possibility of hazardous reactions: None known.

Hazardous polymerization: None known.

11. Toxicological information

Health effects of the ingredients: Aluminum oxide poses a low health risk by inhalation. It is generally considered biologically inert.

Health effects of additional compounds that may form: No new or additional components are expected to form during processing.

Acute toxicity, LD50 and LC50 analysis: Oral LD50 ratio > 5000 mg/Kg, Inhalation LC50 ratio > 5 mg/m^3.

Aspiration toxicity: No information available.

Corrosivity: Non-corrosive product.

Eye irritation: May cause irritation.

Skin irritation: May cause mild irritation on contact with the skin.

Respiratory or skin sensitization: Does not cause skin sensitization.

Chronic toxicity: Not applicable.

Carcinogenicity: Not classified as carcinogenic.

Mutagenicity: Not applicable.

Effects on reproduction and lactation: Not applicable.

Signs and symptoms of exposure: Nausea, vomiting, constipation.

12. Ecological information

Ecotoxicity: No relevant information available.

Persistence and degradability: Not biodegradable.

Bioaccumulation: Not bioaccumulative.

Mobility in soil: No relevant information available.

PBT and vPvB assessment: The product does not contain any substance classified as PBT or vPvB.

Other adverse effects: No data available.

13. Disposal considerations

Recommended disposal methods

- **Product:** Offer surplus and non-recyclable solutions to a licensed waste disposal company. Whenever possible, recycle the material or dispose of it in accordance with the regulations in force in the country.
- **Packaging:** Dispose of in accordance with current regulations. If possible, reuse according to the technical instructions for each type of packaging.
- **Other recommendations:** Disposal recommendations are based on the type and form in which the material is supplied. Disposal must comply with current applicable laws and regulations and with the characteristics of the material at the time of disposal. Collect and reuse or recycle, if possible.

14. Transport information

UN proper shipping name: ADR/RID, DOT (US), IMDG, IATA.

- **ADR/RID:** Non-hazardous goods.
- **DOT (US):** Non-hazardous goods.
- **IMDG:** Non-hazardous goods.
- **IATA:** Non-hazardous goods.

Transport hazard class: Class II.

Packing group: III.

Environmental hazards: None for DOT (US) and IATA.

Special precautions for user: No data available.

15. Regulatory information

This Safety Data Sheet (SDS) was prepared in accordance with ABNT NBR 14725-2/2023.

The inventory name by country or region is listed below.

Country(ies) or Region	Inventory Name	In Inventory
Australia	Australian Inventory of Industrial Chemicals (AIIC)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS, Existing and New Chemical Substances)	Yes
Korea	Korea Existing Chemicals List (KECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States and Puerto Rico	Toxic Substances Control Act Inventory (TSCA)	Yes

16. Other information

This SDS was prepared based on current knowledge of the chemical product and provides information on protection, safety, health and the environment. The data and information transcribed herein are merely complementary in nature, provided in good faith and based on our knowledge of the product at the date of publication of this SDS. No warranty is given as to the result of applying these data and information, and users are not exempt from their responsibilities at any stage of handling the product. The provisions of existing government regulations prevail over the data contained herein.

SDS history: Created on 18/05/2026.

Prepared by: Alphalum technical manager.

Other information: Not applicable.