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Updated: 02/26/07

MSDS SHEET - ALUMINUM OXIDE - TONICA, IL

I. Product Identification

Product/Substance Identification: Fused Aluminum Oxide
Chemical Family: Metal Oxides
Trade Names/Synonyms: Alundum; alumina; Dialuminum Trioxide; Aluminum Sesquioxide; Alpha-Alumina; Beta-Alumina; Gamma-Alumina; Corundum; Alumite; Almite; Martoxin; BaikaloX Polishing Chemicals (Baikowski International Co.); Tabular Alumina (ALCOA); Aluminum Oxide (AL₂O₃); Aluminum Trioxide; Linde A, B, C (Union Carbide Corporation); D Alumina Powders (Union Carbide Corporation); 420003704; WESGO Alumina Ceramics; AL₂O₃; CMC00950

Company Name: Illinois Valley Minerals
 North 18 Mile Road, Route 1
 Tonica, Illinois 61370

Company Emergency Phone Number: 800-682-8478
CHEMTREC®: 800-424-9300
HMIS Number: 1

II. Hazardous Ingredients

Material	C.A.S. #	%	OSHA PEL	ACGIH TLV	NIOSH
Aluminum Oxide	1344-28-1	94-100%	15mg/M ³ (Total Dust) 5mg/M ³ (Resp Fraction)	10 mg/M ³	(RTECS) BD1200000
Titanium Dioxide	13463-67-7	0-4%	15mg/M ³ (Total Dust) 5mg/M ³ (Resp Fraction)	10 mg/M ³	(RTECS) XR2275000
Silicon Dioxide	7631-86-9	0-1.3%	20mppcf 15mg/M ³ / %SiO ₂	10 mg/M ³	(RTECS) VV731000 REL=TWA 6 mg/M ³

- Occupation Safety and Health Administration final rule permissible exposure limits.
- American Conference of Governmental Industrial Hygienists threshold limit values.

III. Physical & Chemical Characteristics

Boiling Point: 5396°F, 2980°C
Vapor Pressure: 1 mmHg @ 2158°C
Vapor Density: N/A
Evaporation Rate: N/A
Molecular Weight: 101.96
Appearance and Odor: White to Gray/Brown crystals or powder; Odorless

Melting Point: 3727-3762°F, 2053-2072°C
Solubility in Water: Insoluble
Specific Gravity (H₂O = 1): 3.965 @ 25°C
% Volatile: <0.5%
PH: N/A

IV. Fire & Explosion Hazard Data

Flash Point: N/A
Flammability Limits: N/A
Explosive Limits: N/A
Unusual Fire & Explosion Hazards: None (Material not combustible)
Special Fire Fighting Procedures: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

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V. Incompatibilities & Reactivity Data

Stability: Stable

Conditions to Avoid: Generating Dust

Incompatibility (Materials to Avoid): Halo carbons, halogens, combustible materials, oxidizing materials, Chlorinated rubber (Hot), Chlorine Trifluoride (Violent reaction and possible ignition), Ethylene Oxide (may initiate explosive polymerization), Halocarbons (Exothermic reaction about 200°C, Halocarbons + metals (Exothermic reactions at ambient temperatures). Oxygen Difluoride (Exothermic reaction), Sodium Nitrate (may form explosive mixture), Vinyl acetate (Possible vigorous reactions).

Hazardous Decomposition Products: Thermal decomposition products: miscellaneous decomposition products.

VI. Health Hazard Data

Routes of Entry: Inhalation

Health Hazards: Acute upper respiratory irritation. Chronic may lead to extensive fibrosis & progressive lung disease.

Inhalation:

Short term exposure: irritation, metal fume fever, difficulty breathing, lung damage.

Long term exposure: same as effects reported in short term exposure.

Metal Fume Fever an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may occur. Tolerances to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

Skin Contact:

Short term exposure: irritant dermatitis accompanied by pruritis.

Long term exposure: no information available.

Eye Contact:

Short term exposure: mechanical irritation with redness and possible swelling of the conjunctiva.

Long term exposure: no information available.

Ingestion:

Short term exposure: no information available.

Long term exposure: no information on significant adverse effects. Some aluminum compounds cause constipation.

Carcinogenicity:

NPT: No

IARC: No

OSHA: No

VII. First Aid Measures

Inhalation: Move to fresh air. If difficulty breathing, oxygen may be administered. If not breathing performance of artificial respiration should be given. Get immediate medical attention.

Skin Contact: If adverse reaction occurs, wash exposed areas with soap and water for at least 15 minutes. Remove contaminated clothing, wash clothing thoroughly and separately from uncontaminated clothing before re-use. If irritation persists, seek medical attention.

Eye Contact: Flush with water for at least 15 minutes, occasionally lifting upper and lower eyelids. If irritation persists, seek medical attention immediately.

Ingestion: Immediately contact local poison control center.

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VIII. Precautions for Safe Handling & Use

Steps to be taken in case of spill: Sweep, shovel or vacuum materials. Limit exposure to dust.
Waste Disposal Method: Comply with all State, Federal and Local regulations.
Precautions for Handling/Storage: Limit generation of dust. Keep separate from incompatible substances.
Other Precautions: Avoid inhalation, ingestion and contact with skin or eyes.

IX. Control Measures

Respiratory Protection: As needed. NIOSH approved dust respirator recommended for limiting exposure. Similar respiratory protection required at concentrations above PEL.
Ventilation: Adequate local exhaust.
Protective Gloves: As needed.
Eye Protection: Safety goggles.
Other Protection: Clothing/Equipment: chemical resistant clothing.
Work/Hygienic Practices: Minimize generation of dust. Wash thoroughly after use.

X. SARA Title III Reporting

To the best of our knowledge, this product does not contain any substances requiring on the SARA, Title III, Section 313 list.

XI. Silicosis Warning

DISCLAIMER: The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any representation or warranty, expressed or implied, regarding accuracy. These conditions or methods of handling, storage use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. Customers/users of silica must comply with all applicable health and safety laws, regulations and orders, including the OSHA Hazardous Communication Standard.

⚠ DANGER Breathing dust containing silica will cause silicosis, a fatal lung disease. Breathing dust during blasting operations will cause asbestosis, lead poisoning and/or other serious or fatal diseases. A NIOSH-approved, well-maintained, supplied-air abrasive blasting respirator must be used by anyone blasting, anyone handling or using the abrasive and anyone in the area of the dust. Harmful dust containing toxic material from abrasives or surfaces being blasted can remain suspended in the air for long periods of time after blasting has ceased. Failure to avoid the above danger will result in death or serious injury.

⚠ DANGER You must comply with all OSHA, local, City, State, Province, Country and jurisdiction regulations, ordinances and standards, related to your particular work area and environment. Keep unprotected individuals out of the work area. Failure to avoid the above danger will result in death or serious injury.



For more information call:

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