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**Aluminum Oxide (pieces, granules)**

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**1. Product Identification**

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Trade Name: Aluminum oxide  
Chemical Formula: Al<sub>2</sub>O<sub>3</sub>  
Recommended Use: Surface coating

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**2. Hazards Identification**

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Signal Word: None  
Hazard Statements: None  
Precautionary Statements: None  
HMIS Ratings (0-4):  
    Health: 1  
    Flammability: 0  
    Physical: 0

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**3. Composition**

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Chemical Family: Alumina, Aluminum(III) oxide  
Ceramic Additional Names: Corundum, Aloxide, Aloxite,  
Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>):  
    Percentage: 80-100 wt%  
    CAS #: 1344-28-1  
    EC #: 215-691-6

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**4. First Aid Procedures**

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General Treatment: Seek medical attention if symptoms persist.  
Special Treatment: None  
Important Symptoms: None  
Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.  
Ingestion: Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.  
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.  
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

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**5. Fire and Explosion Hazards Data**

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Flammability: Non-flammable  
Flash Point: N/A  
Autoignition Temperature: N/A  
Extinguishing Media: No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.  
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

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6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

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7. Handling and Storage

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Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

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8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	15 mg/m <sup>3</sup> as Al <sub>2</sub> O <sub>3</sub> , long-term value, total dust or respirable fraction
Threshold Limit Value:	1 mg/m <sup>3</sup> as Al, long-term respirable fraction
Special Equipment:	None
Respiratory Protection:	Dust Respirator, NIOSH approved
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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9. Physical and Chemical Characteristics

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Color	White or off-white
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	2980 °C
Melting Point:	2043 °C
Density:	3.965 g/cc
Molecular weight:	101.961 g/mol

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10.Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Halogenated compounds
Incompatible Conditions:	None
Hazardous Decomposition Products:	Metal oxide fume

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11.Toxicological Information

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Potential Health Effects:	
Eyes:	May cause irritation
Skin:	None
Ingestion:	None
Inhalation:	May cause irritation
Chronic:	N/A

Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A

Median Lethal Dose: N/A

Carcinogen: N/A

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12.Ecological Information

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Ecological data is not available.

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13.Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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14.Transportation Data

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Hazardous: The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

Hazard Class: Not classified. No transport warning sign required.

Packing Group: Not applicable

UN Number: Not applicable

Proper Shipping Name: Not applicable

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15.Regulatory Information

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Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: Not listed or exempt

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16.Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. **No warranty, guarantee or representation is made to its accuracy, reliability or completeness.** These materials should only be handled by, or under the direct supervision of a “technically qualified individual”, as defined in TSCA regulations 40 CFR 710.3(ee). The information given is based on our knowledge of this product, at the time of publication. It is

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given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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