



Paradise Minerals

One of the biggest manufacturer and exporter of Minerals

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CALCINED ALUMINA

Safety Data Sheet (SDS)

Premium Grade for Submerged Arc Welding (SAW) Flux Manufacturing

Product Name: Calcined Alumina
Chemical Name: Aluminium Oxide
Chemical Formula: Al_2O_3
CAS No.: 1344-28-1
EC No.: 215-691-6
UN Number: Not Regulated

Product Overview

Paradise Minerals supplies **high-purity Calcined Alumina**, specially processed for **Submerged Arc Welding (SAW) Flux** manufacturing. The product offers excellent thermal stability, high hardness, low impurity levels, and consistent particle size, making it an ideal raw material for premium welding flux formulations.

Key Features

- ✓ High Purity Aluminium Oxide (Al_2O_3)
- ✓ Excellent Thermal Stability
- ✓ High Hardness & Wear Resistance
- ✓ Low Moisture Content
- ✓ Controlled Particle Size Distribution

✓ Chemically Stable

✓ Suitable for SAW Flux Manufacturing

Typical Applications

- Submerged Arc Welding (SAW) Flux
- Agglomerated Welding Flux
- Welding Consumables
- Refractory Materials
- Ceramics
- Abrasives
- Foundry Industry
- Metallurgical Applications

Typical Physical Properties

Property	Value
Chemical Formula	Al ₂ O ₃
Appearance	White Fine Powder
Physical Form	Powder
Colour	White
Odour	Odourless
Bulk Density	0.9–1.2 g/cm ³ (Approx.)
Specific Gravity	3.90–3.98
Melting Point	Approximately 2,050°C
Solubility	Insoluble in Water
Moisture	Low
Stability	Stable Under Normal Conditions

Typical Chemical Composition*

Component	Typical Value (%)
Aluminium Oxide (Al ₂ O ₃)	≥99.0
Sodium Oxide (Na ₂ O)	≤0.50
Silicon Dioxide (SiO ₂)	≤0.10
Ferric Oxide (Fe ₂ O ₃)	≤0.05
Calcium Oxide (CaO)	≤0.05
Loss on Ignition (LOI)	≤0.20

***Typical values. Actual composition may vary depending on grade and customer specification.**

Safety Information

Calcined Alumina is **not classified as hazardous** under the Globally Harmonized System (GHS). Dust generated during handling may cause temporary irritation to the eyes, skin, and respiratory tract.

First Aid Measures

Eye Contact

Flush immediately with clean water for at least 15 minutes. Seek medical attention if irritation persists.

Skin Contact

Wash thoroughly with soap and water.

Inhalation

Move the affected person to fresh air. Obtain medical attention if symptoms continue.

Ingestion

Rinse mouth with water. Seek medical advice if discomfort occurs.

Fire Fighting Measures

- Non-Combustible Material
- Suitable Extinguishing Media:
 - Water Spray
 - Foam
 - Carbon Dioxide (CO₂)
 - Dry Chemical Powder

Handling & Storage

- Avoid excessive dust generation.
 - Ensure adequate ventilation.
 - Use appropriate personal protective equipment.
 - Store in a cool, dry, and well-ventilated area.
 - Protect from moisture and contamination.
 - Keep bags tightly sealed when not in use.
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Exposure Controls & Personal Protection

Eye Protection: Safety Goggles

Respiratory Protection: N95 Dust Mask or Approved Respirator

Hand Protection: Protective Gloves

Foot Protection: Safety Shoes

Protective Clothing: Recommended during industrial handling

Stability & Reactivity

Chemical Stability: Stable under recommended storage conditions.

Conditions to Avoid:

- Excessive dust generation
- Contact with strong reducing agents
- Moisture during prolonged storage

Hazardous Decomposition Products:

No hazardous decomposition products under normal conditions.

Environmental Information

- Chemically inert under normal conditions.
 - Prevent unnecessary dust release into the environment.
 - Dispose of waste in accordance with local environmental regulations.
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Transportation Information

Not classified as dangerous goods under:

- IMDG Code
 - ADR
 - IATA
 - RID
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Why Choose Paradise Minerals?

- ✓ High Purity (Up to 99%+ Al_2O_3)
- ✓ Consistent Particle Size Distribution

- ✓ Low Impurity Levels
- ✓ Excellent Thermal Performance
- ✓ Reliable Bulk Supply
- ✓ Strict Quality Assurance
- ✓ Trusted Industrial Mineral Supplier Since **1981**