

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Aluminum Oxide
- English Name: Aluminum Oxide
- CAS Number: 1344-28-1
- Formula: Al_2O_3
- Molecular Weight: 101.96 g/mol
- Product Characteristics: High-purity white fine powder, odorless, chemically stable. Excellent hardness, heat resistance, and wear resistance. Insoluble in water, compatible with most materials.

2. Technical Specifications

Item	Specification
Appearance	White fine powder
Purity (Al_2O_3)	$\geq 99.0\%$
Al Content	52.9-53.9%
Moisture Content	$\leq 0.5\%$
Heavy Metals (Pb)	$\leq 0.001\%$
Iron (Fe)	$\leq 0.01\%$
Silicon (Si)	$\leq 0.1\%$
Water Insoluble Matter	$\leq 0.05\%$
Acid Insoluble Matter	$\leq 0.03\%$
Particle Size	1-50 μm
Heat Resistance	$\geq 2000^\circ C$ (no decomposition)
Hardness (Mohs)	9

3. Product Advantages

- High purity and consistent particle size ensure stable performance.
- Excellent hardness and wear resistance for abrasive applications.
- Good heat stability and chemical inertness.
- Versatile application in industrial, electronic, and cosmetic fields.
- Cost-effective and reliable quality.

4. Application Fields

- Abrasives: Grinding wheels, sandpaper, polishing pastes (metal, glass, stone polishing).
- Ceramics & Refractories: High-temperature ceramics, refractory bricks, kiln linings.
- Catalyst Support: Carrier for chemical reaction catalysts (petrochemical industry).
- Electronic Materials: Insulators, semiconductor substrates, LED packaging materials.
- Cosmetics: Exfoliant in skin care products (cosmetic grade).
- Other: Dental materials, filler for plastics/rubbers, water treatment filters.



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

5. Usage Methods

- Abrasives: Mix with binders to produce grinding tools; or use as loose abrasive.
- Ceramics: Add 10-30% to ceramic formulations, sinter at high temperature.
- Catalyst Support: Impregnate with active components (e.g., platinum) before use.
- Cosmetics: Add 5-15% to exfoliating products (scrubs, cleansers).
- Optimal Conditions: Use at 20-35°C; avoid mixing with strong reducing agents.

6. Packaging & Storage

- Packaging Specifications: 10 kg/bag (plastic-lined kraft bag), 25 kg/drum (HDPE), 1000 kg/IBC tote.
- Storage Conditions: Store in cool, dry, well-ventilated warehouse. Avoid moisture and direct sunlight. Temperature $\leq 30^{\circ}\text{C}$.
- Shelf Life: 36 months (unopened).
- Transportation: Handled as non-dangerous goods; avoid collision and moisture.

7. Safety & Protection

- Wear dust mask, protective gloves, and safety goggles during handling.
- Avoid dust inhalation and eye contact; rinse immediately if contact occurs.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Cosmetic-grade products meet FDA and EU cosmetic regulations.
- Each batch accompanied by COA.

纳维盈医化科技
NEWAY SINOPHC TECH