

TECHNICAL DATA SHEET (TDS)

PREMIUM WHITE BARITE POWDER (BARIUM SULPHATE) Automotive Friction Material & OEM Specifications

1. Product Description & Overview

Our Premium White Barite (Barium Sulphate) series is carefully processed from high-purity natural ore deposits. Manufactured to satisfy the stringent requirements of OEM Needs, Tier-1 automotive friction material developers, and high-end industrial compounders. Boasting exceptional natural whiteness, high specific gravity, and a totally inert chemical profile, these grades serve as structural functional fillers in noise-vibration-harshness (NVH) abatement, low-metallic, non-asbestos organic (NAO), and ceramic brake formulations.

2. Grade-Specific Technical Specifications Matrix

Technical Parameter	Grade WB-3.95	Grade WB-4.00+	Grade WB-4.20+	Grade WB-4.30+
Specific Gravity (SG)	3.95 ± 0.03	4.00 – 4.15	4.20 – 4.28	4.30 – 4.35
BaSO4 Content (%)	≥ 80.0%	≥ 85.0%	≥ 92.0%	≥ 93%
Whiteness / Brightness	≥ 80%	≥ 90%	≥ 93%	≥ 95%
Iron Oxide (Fe2O3)	≤ 0.25%	≤ 0.15%	≤ 0.08%	≤ 0.04% (Ultra-Low)
Silica (SiO2)	≤ 3.5%	≤ 2.5%	≤ 1.5%	≤ 1.0%
Moisture Content	≤ 0.20%	≤ 0.15%	≤ 0.10%	≤ 0.10%
Oil Absorption (g/100g)	11.0 – 14.5	10.5 – 13.0	9.0 – 11.5	8.5 – 10.5

pH Value	6.5 – 8.5	7.0 – 8.5	7.0 – 8.0	7.0 – 8.0
Standard Mesh Size	325 / 400 mesh	325 / 500 mesh	325 / 500 / Micro	325 / Micro-Barytes

3. Target Applications by Grade

- **Grade WB-3.95 (Economy White):** Perfect for aftermarket non-metallic friction linings, light vehicle organic brake pads, and consumer rubber compounds where color fastness is prioritized over maximum density.
- **Grade WB-4.00+ (Standard OEM):** Widely utilized by domestic brake pad manufacturers for entry-level OEM passenger vehicle disc pads, premium clutch facings, and architectural noise insulation sheets.
- **Grade WB-4.20+ (Premium Heavy-Duty OEM):** Recommended for high-end Ceramic and Low-Metallic brake pads requiring zero rotor scratch (due to minimal silica/iron grit) and exceptional thermal dissipation lines.
- **Grade WB-4.30+ (Ultra High-Density / High-Purity):** The absolute benchmark for high-speed railway brake blocks, heavy-duty commercial vehicle (CV) pads, defense braking systems, and premium clear-coat plastics.

4. Key Physical & Chemical Properties

- **Extreme Whiteness ($\geq 88\%$ to $\geq 95\%$):** Prevents dark tint tracking or discoloration in non-black passenger car pads.
- **Non-Abrasive Matrix ($\text{Fe}_2\text{O}_3 \leq 0.04\%$):** Exceptional safety profile preventing early brake disc/rotor scoring or wear.
- **Optimal Particle Size Distribution:** Seamless blending prevents agglomeration or pocket voids during hot pressing.
- **Low Oil Absorption & Chemically Inert:** Minimizes complex resin and binding agent demand during compound mixing.

5. Standard Packaging & Supply Capacity

- **Packaging Options:** 25 kg Multi-layer Paper / PP Moisture-proof bags OR 1.0 to 1.5 Metric Ton (MT) Jumbo bags with internal liners.
- **Monthly Production Capacity:** [1,500+ Metric Tons] to guarantee continuous commercial supply chains.

For Laboratory Samples, Quotes, or Technical Audits, Contact:

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