

Technical Data Sheet: Calcined Manganese Carbonate for Industrial Brick Coloring

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1. Product Description

Calcined Manganese Carbonate is a specialized manganese source engineered for industrial brick and ceramic coloration. With a precisely controlled manganese (Mn) content ($\geq 44\%$), this product ensures consistent and uniform color development in the manufacturing of industrial bricks. Its calcined form is particularly suited for blending into clay bodies and for use in high-temperature firing processes, where it contributes to stable and predictable color outcomes.

2. Key Features

- Stable Manganese Source:** Provides a consistent and reliable source of manganese, crucial for achieving uniform brown, purple, and black coloration in bricks.
- Improved Color Uniformity:** The calcined nature of the material enhances color uniformity after high-temperature decomposition, leading to more consistent finished products.
- Controlled Impurities (Fe, Ca, Mg):** Carefully controlled levels of iron (Fe), calcium (Ca), and magnesium (Mg) minimize color deviation and improve the reproducibility of desired shades.
- Low Heavy Metals (Pb, Cd, As):** Adheres to environmental and construction compliance standards due to low levels of heavy metals, ensuring safer application.

- **Uniform Particle Size:** Guarantees even dispersion within clay mixtures, which is vital for homogeneous color distribution throughout the brick body.
- **Scalable Production Consistency:** Designed to support scalable industrial production, ensuring consistent quality and color across large batches of bricks.

3. Technical Specifications

Parameter	Typical Value
MnCO ₃ Purity	≥ 98%
Manganese (Mn) Content	≥ 44%
Particle Size	80–200 mesh
Moisture	≤ 1.5%
Bulk Density	0.9–1.3 g/cm ³
Loss on Ignition (Calcined)	Controlled
Iron (Fe)	≤ 0.05–0.10%
Calcium (Ca)	≤ 0.30%
Magnesium (Mg)	≤ 0.30%
Lead (Pb)	≤ 10 ppm
Arsenic (As)	≤ 5 ppm
Cadmium (Cd)	≤ 5 ppm

4. Applications

Calcined Manganese Carbonate is extensively used in various applications within the construction and ceramic industries:

- **Brick Manufacturing:** Primarily used to impart controlled brown to dark coloration in fired clay bodies, enhancing the aesthetic appeal of bricks.

- **Roof Tiles and Ceramic Tiles:** Contributes to improved color stability and long-term durability of roof and ceramic tiles, maintaining their visual integrity over time.
- **Facing Bricks:** Ensures a uniform aesthetic appearance across different batches of facing bricks, which is critical for architectural consistency.
- **Clay Body Pigmentation:** As a calcined material, it decomposes to active oxides during firing, significantly influencing the final color tone of clay products.
- **Construction Materials:** Also utilized in colored concrete and other decorative building elements to achieve specific color effects.

5. Packaging & Supply

BTLnewmaterial is committed to the secure and efficient delivery of Calcined Manganese Carbonate for Industrial Brick Coloring, offering the following packaging and supply options:

- **Packaging:** Supplied in robust 25 kg kraft paper bags, each equipped with a polyethylene (PE) liner to provide superior protection against moisture and environmental factors.
- **Export:** Products are prepared with palletized export packaging, designed to ensure stability and integrity during international shipping and handling.
- **Shipment:** Available for container shipment (20GP / 40HQ), accommodating a wide range of order volumes and logistical requirements.
- **Samples:** Sample quantities are available upon request for customers to conduct preliminary brick formulation and kiln testing, facilitating product evaluation and integration into their processes.

Disclaimer: The information provided herein is believed to be accurate and reliable. However, BTLnewmaterial makes no warranty, express or implied, concerning the use of this product. Users are responsible for determining the suitability of the product for their specific applications. This information is subject to change without notice.