

CCEFIRE® DEM Series Mullite Brick

Description:

CCEFIRE® DEM Series Mullite bricks characterized with high refractoriness that can reach more than 1790C. Load softening temperature is between 1600 ~ 1700°C. Compressive strength at normal temperature is 70 ~ 260MPa. Good thermal shock resistance.

Technical data and Size:

CCEFIRE® DEM Series Mullite Brick					
Item		DEM60	DEM65	DEM70	DEM75
Chemical composition	Al₂O₃ (%)	≥60	≥65	≥70	≥75
	SiO₂ (%)	≤35	≤33	≤26	≤24
	Fe₂O₃ (%)	≤1.0	≤1.0	≤0.6	≤0.4
Apparent Porosity (%)		≤17	≤17	≤17	≤18
Bulk Density (g/cm³)		≥2.55	≥2.55	≥2.55	≥2.55
Cold Crushing Strength (Mpa)		≥60	≥60	≥80	≥80
Permanent Linear Change On Reheating (%) 1500°CX2h		0~+0.4	0~+0.4	0~+0.4	0~+0.4
Thermal Conductivity (W/MK) 1000 °C		1.74	1.84	1.95	1.95

Raw Materials

Own large-scale ore base, professional mining equipment, and stricter selection of raw materials.

The incoming raw materials are tested first, and then the qualified raw materials are kept in a designated raw material warehouse to ensure their purity.

The raw materials of CCEFIRE fire bricks have low impurity content with less than 1% oxides, such as iron and alkali metals. Therefore, CCEFIRE clay bricks have high refractoriness.

Production Process

The fully automated batching system fully guarantees the stability of the raw material composition and better accuracy in raw material ratio.

With internationally advanced automated production lines of high-temp tunnel furnaces, shuttle furnaces, and rotary furnaces, the production processes from raw materials to finished products are under automatic computer-control, ensuring stable product quality.

Automated furnaces, stable temperature control, low thermal conductivity of CCEFIRE insulation bricks, excellent thermal insulation performance, less than 05% in the permanent line change, stable quality, and longer service life.

Various shapes of clay bricks can be made according to designs. They have precise dimensions with an error of +1mm and are convenient for customers to install.

Quality Control

Each shipment has a dedicated quality inspector, and a test report is provided prior to the departure of products from the factory to ensure the export quality of each shipment of CCEFIRE.

A third-party inspection (such as SGS, BV, etc.) is accepted.

Production is strictly in accordance with ASTM quality management system certification.

The outer packaging of each carton is made of five layers of kraft paper, and outer packaging + pallet,, suitable for long-distance transportation.

Application Performance

CCEFIRE refractory bricks are weakly acidic refractory materials with good thermal stability, so they are suitable for the lining of blast furnaces, hot blast furnaces, electric furnace top, blast furnaces, reverberatory furnaces, and rotary furnaces.