

Technical Data Sheet



PRODUCT:

Mullite Insulation Brick

Introduction

The product features low bulk density, excellent thermal insulation performance, good high-temperature stability, and low thermal conductivity. It integrates dual functions of thermal insulation and fire resistance, which can effectively reduce heat loss of industrial kilns, save energy consumption, and extend the service life of kiln linings.

Application

This product is widely used in thermal insulation layers and backing layers of various industrial kilns and equipment, especially suitable for:

- Lime kilns, rotary kilns, and tunnel kilns
- Ceramic kilns, glass kilns, and cement kilns
- Heat treatment furnaces, electric furnaces, and boiler linings
- Petrochemical, metallurgical, and building materials industry kilns

It can effectively reduce the surface temperature of kiln bodies, save energy consumption (reduce heat loss by 20-30% compared with traditional insulation materials), and improve the operating efficiency of kilns.

Physical and Chemical Specifications

Product Model	JM-23	JM-26	JM-28	JM-30	JM-32
Classification Temperature (℃)	1260	1430	1540	1650	1760
Bulk Density (kg/m ³)	600	800	900	1050	1200
Flexural Strength(MPa)	0.8	1.3	1.5	1.8	2
Cold Compressive Strength(MPa)	1.0	1.5	2	2	3.2
Permanent Linear Change Rate (%) (at the following temperatures for 24h)					
1200℃	%	-0.3			
1350℃	%		-0.3		
1450℃	%			-0.5	
1500℃	%				-1
1650℃	%				-1
Reversible Thermal Expansion Coefficient (Maximum Value) %	0.6	0.8	0.8	1	1.1
Creep (Deformation in 60 Minutes)					
1100℃ at 0.034MP(5ps)	%	0.1			
1260℃ at 0.034MP(10ps)	%		0.3		
1320℃ at 0.034MP(10ps)	%			0.2	
1370℃ at 0.034MP(10ps)	%				0.2
1450℃ at 0.034MP(10ps)	%				0.6
Thermal Conductivity (Average Temperature) W/M·K					
400℃	0.15	0.26	0.27	0.3	0.35
600℃	0.18	0.27	0.29	0.32	0.37

800℃		0.22	0.29	0.32	0.34	0.4
1000℃		0.26	0.3	0.36	0.38	0.44
1200℃		0.32	0.32	0.4	0.42	0.45
1400℃		-	-	0.44	0.45	0.5
Chemical Composition %						
Al ₂ O ₃	%	45.0	50	55	65	60
SiO ₂	%	48	45	41	32	28
Fe ₂ O ₃	%	1	0.9	0.9	0.7	0.7
TiO ₂	%	0.8	0.6	0.5	0.4	0.2
CaO	%	0.8	0.4	0.4	0.3	0.1
MgO	%	0.5	0.2	0.2	0.1	0.1
Na ₂ O+K ₂ O	%	1.2	1	0.9	0.8	0.7

Specifications & Packaging

Standard size: 230×114×65mm, 230×114×75mm, 230×114×90mm (can be customized according to customer drawings and requirements).

Packed in cartons with foam lining, then bundled with wooden pallets. Net weight per pallet: 1000-1500kg. Packaging can be adjusted according to international transportation requirements (such as FCL/LCL shipping).

Storage & Handling

Store in a dry, well-ventilated warehouse to avoid moisture absorption, rain, and collision.

Handle with care during transportation to prevent damage to the product structure.

The shelf life is 6 months under proper storage conditions.

Quality Assurance

Our products are manufactured in strict accordance with ISO 9001 quality management system standards. Each batch of products undergoes rigorous inspection (chemical composition, physical properties, thermal performance) before delivery, and a quality inspection report is provided along with the goods.