

Technical Specification of Baking Furnace Lining Material

1 Equipment Name: Baking Furnace Lining Material

2 Technical Specification

2.1 Refractories 1-2

1) Physicochemical indexes shall comply with the following properties:

Physicochemical Indexes		Unit	Limit Value
Chemical Composition	Al ₂ O ₃	%	≥48
	Fe ₂ O ₃	%	≤1.4
	CaO+MgO	%	≤0.7
	Na ₂ O+K ₂ O	%	≤0.8
Bulk Density		g/cm ³	≥2.3
Apparent Porosity		%	≤18
Ambient Compressive Strength		MPa	≥50
Softening Point under a Fixed Load (0.2Mpa,0.5%)		℃	≥1470
High Temperature Creep Rate (1280℃,0.2Mpa,25h)		%	≤0.4
High Temperature Flexural Strength	1200℃	MPa	≥12
	1350℃		≥6
Thermal Expansion Coefficient (20℃ ~ 1000℃)		%	≤0.6
Heating Permanent Linear Change (1400℃ X2h)		%	±0.1
Thermal Shock Resistance (Water Cooling under 1100℃)		Time	≥20

2) Application

Flue wall

(F1,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,F13,F14,F15,F16)

3) The allowable deviation of dimensions shall conform to the requirements of the design drawings.

4) The brick appearance shall conform to YB/T 5106-2009.

2.2 Refractories 1-3

1) Physicochemical indexes shall comply with the following properties:

Physicochemical Indexes		Unit	Limit Value
Chemical Composition	Al ₂ O ₃	%	≥48
	Fe ₂ O ₃	%	≤1.4
	CaO+MgO	%	≤0.7
	Na ₂ O+K ₂ O	%	≤0.8
Bulk Density		g/cm ³	≥2.3
Apparent Porosity		%	≤20
Ambient Compressive Strength		MPa	≥50
Softening Point under a Fixed Load (0.2Mpa,0.5%)		℃	≥1470
High Temperature Creep Rate (1280℃,0.2Mpa,25h)		%	≤0.45
High Temperature Flexural Strength	1200℃	MPa	≥12
	1350℃		≥6
Thermal Expansion Coefficient (20℃～1000℃)		%	≤0.6
Heating Permanent Linear Change (1400℃ X2h)		%	±0.1
Thermal Shock Resistance(Water Cooling under 1100℃)		Time	≥20

2) Application

Cross wall

(H1,H2,H3,H4,H5,H6,H7,H8,H9,H10,H11,H12,H13,H14,H15,H16,H17,H18,H19,H20,H21,H22,H23,H24,H25,H26,H27)

3) The allowable deviation of dimensions shall conform to the requirements of the design drawings.

4) The brick appearance shall conform to YB/T 5106-2009.

2.4 Refractories 2-4

1) Physicochemical indexes shall comply with the following properties:

Physicochemical Indexes		Unit	Limit Value
Chemical Composition	Al ₂ O ₃	%	58~62
	Fe ₂ O ₃	%	≤1.4
	CaO+MgO	%	≤0.4
	Na ₂ O+K ₂ O	%	≤0.3
Refractoriness		℃	≥1790
Bulk Density		g/cm ³	≥2.55
Apparent Porosity		%	≤16
Ambient Compressive Strength		MPa	≥65
Softening Point under a Fixed Load (0.2Mpa,0.6%)		℃	≥1570
High Temperature Creep Rate (1280℃,0.2Mpa,25h)		%	≤0.3
High Temperature Flexural Strength	1200℃x0.5h	MPa	≥18
	1350℃x0.5h		≥8
Thermal Expansion Coefficient (20 ℃ ~ 1000℃)		%	≤0.6
Heating Permanent Linear Change(1500 ℃ X2h)		%	±0.1
Thermal Shock Resistance(Water Cooling under 1100℃)		Time	≥30

2) Application

Flue wall draught brick

(F2)

3) The allowable deviation of dimensions shall conform to the requirements of the design drawings.

4) The brick appearance shall conform to GB/T 2988-2012.