

## HIGH ALUMINA BRICKS



### PROPERTIES

- Alumina content in High Alumina Bricks up from 45%-95% and service temperature up to 1,900°C.
- Excellent corrosion resistance to neutral slag and metal penetration resistance at high liquid temperature.
- Improved thermal shock and corrosion resistance at high temperature.
- High density, high mechanical strength and good volume stability at high temperature.

### APPLICATIONS

- Good for iron and steel making operation at the area of working zone in ladle and EAF roof.
- For reheating furnace such as anchor brick and burner block
- Transition and cooling zone of rotary cement kiln, lime shaft kiln etc.
- Bottom and door foundry air furnace and side wall of aluminum refining melting furnace, etc.

## SK36

### CLASSIFICATION: HIGH-ALUMINA BRICK

#### PHYSICAL PROPERTIES

Pyrometric cone equivalent	Orton cone	35-36
Refractoriness	°C	1,785
Bulk Density	kg/m <sup>3</sup>	2,300-2,350
Apparent Porosity	%	20.0-22.0
Cold crushing strength	MPa	45-48
Modulus of rupture	Kg/cm <sup>2</sup>	70-80
Reheat test, Permanent linear change		
After heating at 1,400°C	%	+0.5

#### THERMAL EXPANSION

At 800°C	%	0.40
At 1,000°C	%	0.60
At 1,200°C	%	0.70
At 1,400°C	%	0.82

#### CHEMICAL COMPOSITION: (APPROXIMATE)

Silica (SiO <sub>2</sub> )	%	38.2
Alumina (Al <sub>2</sub> O <sub>3</sub> )	%	48.0-55.0
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	%	1.8
Calcium Oxide (CaO)	%	0.4
Alkalines (Na <sub>2</sub> O+K <sub>2</sub> O+Li <sub>2</sub> O)	%	0.5

★All the technical data are typical of the properties of commercial standard brick. The data are subject to reasonable variation, should not be used for specification purpose.

## SK38

### CLASSIFICATION: HIGH-ALUMINA BRICK

#### PHYSICAL PROPERTIES

Pyrometric cone equivalent	Orton cone	37-38
Refractoriness	°C	1,810
Bulk Density	kg/m <sup>3</sup>	2,400-2,450
Apparent Porosity	%	19.0-20.0
Cold crushing strength	MPa	50-55
Modulus of rupture	Kg/cm <sup>2</sup>	80-90
Reheat test, Permanent linear change		
After heating at 1,400°C	%	+1.00

#### THERMAL EXPANSION

At 800°C	%	0.45
At 1,000°C	%	0.70
At 1,200°C	%	0.75
At 1,400°C	%	0.90

#### CHEMICAL COMPOSITION: (APPROXIMATE)

Silica (SiO <sub>2</sub> )	%	20.2
Alumina (Al <sub>2</sub> O <sub>3</sub> )	%	70.0-75.0
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	%	1.8
Calcium Oxide (CaO)	%	0.4
Alkalines (Na <sub>2</sub> O+K <sub>2</sub> O+Li <sub>2</sub> O)	%	0.5

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## TS 80

### CLASSIFICATION: HIGH-ALUMINA BRICK 80% ALUMINA

#### PHYSICAL PROPERTIES

Pyrometric cone equivalent	Orton cone	38
Refractoriness	°C	1,835
Bulk Density	kg/m <sup>3</sup>	2,550-2,650
Apparent Porosity	%	18.0-19.0
Cold crushing strength	MPa	60-65
Modulus of rupture	Kg/cm <sup>2</sup>	90-100
Reheat test, Permanent linear change		
After heating at 1,400°C	%	+1.02

#### THERMAL EXPANSION

At 800°C	%	0.50
At 1,000°C	%	0.60
At 1,200°C	%	0.80
At 1,400°C	%	0.90

#### CHEMICAL COMPOSITION: (APPROXIMATE)

Silica (SiO <sub>2</sub> )	%	14.0
Alumina (Al <sub>2</sub> O <sub>3</sub> )	%	81.1
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	%	1.8
Calcium Oxide (CaO)	%	0.3
Alkalines (Na <sub>2</sub> O+K <sub>2</sub> O+Li <sub>2</sub> O)	%	0.3

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## TS 85

### CLASSIFICATION: HIGH-ALUMINA BRICK 85% ALUMINA

#### PHYSICAL PROPERTIES

Pyrometric cone equivalent	Orton cone	>38
Refractoriness	°C	1,840
Bulk Density	kg/m <sup>3</sup>	2,650–2,750
Apparent Porosity	%	17.0–18.0
Cold crushing strength	MPa	70–75
Modulus of rupture	Kg/cm <sup>2</sup>	150–180

#### THERMAL EXPANSION

At 800°C	%	0.35
At 1,000°C	%	0.50
At 1,200°C	%	0.68

#### CHEMICAL COMPOSITION: (APPROXIMATE)

Silica (SiO <sub>2</sub> )	%	8.7
Alumina (Al <sub>2</sub> O <sub>3</sub> )	%	85.0
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	%	1.8
Calcium Oxide (CaO)	%	0.2
Alkalines (Na <sub>2</sub> O+K <sub>2</sub> O+Li <sub>2</sub> O)	%	0.2

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