

# Refractory Bricks

## TR - 40

**Thermal**

PRODUCT : TR 40  
TYPE: 40% ALUMINA BRICK  
NATURE OF BOND: CERAMIC  
SHAPING: DRY PRESSED

### GENERAL PROPERTIES

RAW MATERIAL BASE: CALCINED BAUXITE , CLAY & BRICK GROG  
REVERSIBLE THERMAL EXPANSION: 0.55 % AT 1000 °C

### CHEMICAL ANALYSIS, %

	SPECIFICATION
Al <sub>2</sub> O <sub>3</sub>	40.00 ±2%
Fe <sub>2</sub> O <sub>3</sub>	2.50-3.00 max.

### PHYSICAL PROPERTIES

	SPECIFICATION
Bulk density, g/cc	2.10 MIN.
Apparent porosity, %	22/24
Cold crushing strength, kg/cm <sup>2</sup>	300-350

### THERMAL PROPERTIES

Refractoriness, Orton / °C	+32 / 1717 min.
RUL Ta at 2 kg/cm <sup>2</sup> load	1400 min.
PLC, %	-
after heating at 1500 °C / 2hrs	-
Thermal Conductivity, Kcal/m/hr/°C	±0.8 max.
at 400 °C HF	-
at 600 °C HF	-
at 800 °C HF	-

The above specification are related to 230x115x75 mm standard brick

**Size tolerance : ± 2% or ± 2.5 mm whichever greater**

# Thermal

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## REFRACTORIES

### DATA SHEET

#### REFRACTORY BRICKS

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**PRODUCT:** TR 70  
**TYPE:** 70 % ALUMINA BRICK  
**NATURE OF BOND:** CERAMIC  
**SHAPING:** DRY PRESSED

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#### **GENERAL PROPERTIES**

**RAW MATERIAL BASE:** CALCINED BAUXITE  
**MAX. SERVICE TEMPERATURE:** 1450 °C  
**REVERSIBLE THERMAL EXPANSION:** 0.60 % at 1000 °C

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#### **CHEMICAL ANALYSIS, %**

	<b>TYPICAL VALUE</b>	<b>SPECIFICATION</b>
Al <sub>2</sub> O <sub>3</sub>	71.00	70.00 min.
SiO <sub>2</sub>	20.80	-
Fe <sub>2</sub> O <sub>3</sub>	3.40	3.50 max.
TiO <sub>2</sub>	3.85	-
CaO	0.65	-

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#### **PHYSICAL PROPERTIES**

	<b>TYPICAL VALUE</b>	<b>SPECIFICATION</b>
Bulk density, g/cc	2.56	2.55 min.
Apparent porosity, %	19.00	22 max.
Cold crushing strength, kg/cm <sup>2</sup>	550	500 min.

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#### **THERMAL PROPERTIES**

	<b>TYPICAL VALUE</b>	<b>SPECIFICATION</b>
Refractoriness, Orton/°C	36 /1804	35 /1785 min.
RUL, Ta at 2 kg/cm <sup>2</sup> load, °C	1460	1450 min.
PLC, % after heating at 1500°C / 2 hrs	+ 1.00	± 2.00 max.
thermal conductivity, kcal/m/hr/ °C	1.28	-
at 400 °C HF	1.39	-
at 600 °C HF	1.46	-
at 800 °C HF		

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**Size tolerance: ±1 % or ± 1.5 mm whichever greater**

# Thermal

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## REFRACTORIES

### DATA SHEET

#### REFRACTORY BRICKS

#### PRODUCT

TYPE  
NATURE OF BOND:  
SHAPING:

#### TR30

30 % ALUMINA BRICK  
CERAMIC  
DRY PRESSED

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#### GENERAL PROPERTIES

RAW MATERIAL BASE : BRICK GROG  
MAX. SERVICE TEMPERATURE : 1400 °C  
REVERSIBLE THERMAL EXPANSION: 0.50 % at 1000 °C

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#### CHEMICAL ANALYSIS, %

	TYPICAL VALUE	SPECIFICATION
Al <sub>2</sub> O <sub>3</sub>	32.00	30.00 min
SiO <sub>2</sub>	61.50	-
Fe <sub>2</sub> O <sub>3</sub>	2.80	3.00 max.
TiO <sub>2</sub>	3.10	-
CaO	0.30	-

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#### PHYSICAL PROPERTIES

	TYPICAL VALUE	SPECIFICATION
Bulk density, g/cc	2.16	2.15 min.
Apparent porosity, %	22.50	23 max.
Cold crushing strength, kg/cm <sup>2</sup>	330	300 min.

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#### THERMAL PROPERTIES

	TYPICAL VALUE	SPECIFICATION
Refractoriness, Orton / °C	30 / 1665	29/ 1717min.
RUL, Ta at 2 kg/cm <sup>2</sup> load, °C	1420	1400 min.
PLC, % after heating at 1400 °C / 3 hrs	- 0.30, + 0.26	± 0.80 max.
Thermal Conductivity, kcal/m/hr/ °C at 400 °C HF	0.72	-
at 600 °C HF	0.76	-
at 800 °C HF	0.82	-

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**Size tolerance: ± 1.5 % or ± 2 mm whichever greater**

# Refractory Bricks

## TR - 60

**Thermal**

PRODUCT : TR 60  
TYPE: 60% ALUMINA BRICK  
NATURE OF BOND: CERAMIC  
SHAPING: DRY PRESSED

### GENERAL PROPERTIES

RAW MATERIAL BASE: CALCINED BAUXITE , GROG & CLAY  
REVERSIBLE THERMAL EXPANSION: 0.60 % AT 1000 °C  
MAX SERVICE TEMP 1450°C

### CHEMICAL ANALYSIS, %

	SPECIFICATION
Al <sub>2</sub> O <sub>3</sub>	60.00 ±2%
Fe <sub>2</sub> O <sub>3</sub>	3.00-3.50 max.

### PHYSICAL PROPERTIES

	SPECIFICATION
Bulk density, g/cc	2.50
Apparent porosity, %	21/22
Cold crushing strength, kg/cm <sup>2</sup>	+400

### THERMAL PROPERTIES

Refractoriness, Orton / °C	+35 / 1785 min.
RUL Ta at 2 kg/cm <sup>2</sup> load	1450 min.
PLC, %	-
after heating at 1500 °C / 2hrs	-
Thermal Conductivity, Kcal/m/hr/°C	±2.00 max.
at 400 °C HF	-
at 600 °C HF	-
at 800 °C HF	-

The above specification are related to 230x115x75 mm standard brick

**Size tolerance : ± 2% or ± 2.5 mm whichever greater**