Oryvia Global

Refractory aligned products

Product **Catelogue** 2025

Oryvia Global

About **US**

Oryvia Global LLP is an India-based exporter and supplier of export-grade refractory materials and industrial refractory solutions for high-temperature applications. Operating from **Wankaner, Gujarat—one of India's most established refractory manufacturing hubs**—we work closely with quality-driven production units to supply refractory bricks, monolithic refractories, and customized furnace lining materials that meet international performance standards.

We believe in **consistent quality, technical reliability, and client-focused solutions**. Guided by **integrity, precision, and innovation**, we deliver dependable refractory materials that help industries operate at their best across global markets.

Vision

To be the most trusted global partner for high-performance Indian refractory solutions by 2030.

Mission

Deliver ISO-certified refractories with superior quality, transparent pricing, fast service, and reliable on-time delivery—making global sourcing simple and worry-free.

Experience

Over **30+ years** of supplier expertise ensuring reliable industrial solutions.

Industry serving

Supporting diverse industrial sectors with tailored solutions in **12+ industries.**

Quality

Ensuring **rigorous quality checks** through **structured, process-focused sourcing** approach

Presence

Connected with partners supplying products across more than **20+ global markets**.

Industries We Serve

STEEL INDUSTRIES

FOUNDRY

CEMENT INDUSTRIES

FURNACE CONSTRUCTION

Industries We Serve

INCINERATION

PETRO-CHEMICAL INDUSTRIES

SUGAR INDUSTRIES

ENGINEERING CONSTRUCTION

OUR PRODUCTS

REFRACTORY **FIRE BRICKS**

CERAMIC **FIBERS**

CALCIUM SILICATE BOARDS

REFRACTORY **MORTAR**

OUR PRODUCTS

MONOLITHICS/ **CASTABLES**

REFRACTORY **LIQUID MORTAR**

REFRACTORY **BED MATERIALS**

CALCINED **BAUXITE**

Refractory/ Fire Bricks

Refractory Bricks are manufactured using **high-grade raw materials** sourced from **trusted and reliable vendors**, ensuring consistent quality and performance. These bricks are engineered to deliver **excellent thermal resistance, structural strength**, and **long service life** under extreme temperature conditions.

Our **Refractory Fire Bricks** are widely used in the construction of **furnaces, kilns, fireplaces, and fireboxes.** making them suitable for both **industrial applications** and **commercial buildings** where high heat resistance is critical.

To address diverse operational requirements, we offer refractory bricks in **multiple grades, versions, and sizes**, with the capability to provide **customized solutions based on specific client specifications**, all at competitive market prices.

Refractory/ Fire Bricks:

Product List

Fire Clay Bricks

Type : 25-30% Alumina Bricks
Size : Standard, Tapper, Arch, Slabs, Blocks, Special/Customized size & shape.

High Alumina Bricks

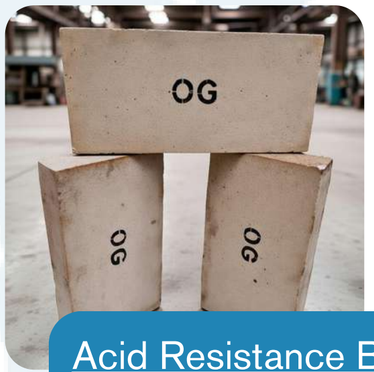
Type : 30-80% Alumina Bricks
Size : Standard, Tapper, Arch, Slabs, Blocks, Special/Customized size & shape.

SK Series Bricks

Type : 30-80% Alumina Bricks
Size : Standard, Tapper, Arch, Slabs, Blocks, Special/Customized size & shape.

Insulating Bricks

Type : 25-60% Alumina
Size : Standard, Tapper, Arch, Slabs, Blocks,Tiles



Acid Resistance Bricks

Type : Class I, II & III
Size : Standard, Tapper, Arch, Slabs, Blocks,

Magnesia Bricks

Type : MgO-80 & MgO-92
Size : Standard, Tapper

High Alumina Bricks

Oryvia Global offers a comprehensive range of **25% to 80% Alumina refractory bricks**, produced using quality-controlled manufacturing processes.

These bricks are available in a wide variety of **standard and engineered shapes**, including standard **bricks, tapers, blocks, slabs, tiles, arch bricks, cupola bricks**, as well as **customized sizes and shapes** to meet specific application requirements.

Technical Specifications: High Alumina Refractory Bricks

	Chemical Analysis (%)		Apparent Porosity (%)	Bulk Density (g/cm3)	CCS (kg/cm2)	PLC (%)	RUL (Ta0C)
	Al2O3	Fe2O3		Min.			
30% Alumina Bricks	28-30 %	3.4-4.5 %	18-22%	2.05	250-300	-0.8 to 0.3 at 13500C/2h	1350-1400
35% Alumina Bricks	34-35 %	3.4-4.2 %	22-23%	2.1	300-350	-0.8 to 0.3 at 14000C/2h	1350-1400
40% Alumina Bricks	38-40 %	3.4-4.2 %	21-22%	2.15	350-550	-0.8 to 0.3 at 14000C/2h	1350-1400
45% Alumina Bricks	43-45 %	3.4-4.2 %	20-21%	2.23	400-600	-0.8 to 0.3 at 14000C/2h	1360-1410
50% Alumina Bricks	48-50 %	3.0-3.5 %	18-19%	2.32	450-650	-0.8 to 0.4 at 14500C/2h	1400-1450
55% Alumina Bricks	53-55 %	2.5-3.0 %	18-19%	2.42	450-650	-0.5 to 1.0 at 14500C/2h	1400-1450
60% Alumina Bricks	58-60 %	2.5-3.0 %	16-17%	2.51	550-800	-0.4 to 2.0 at 15500C/2h	1450-1500
65% Alumina Bricks	63-65 %	2.5-3.0 %	15-16%	2.55	600-850	-0.4 to 2.0 at 15500C/2h	1500-1550
70% Alumina Bricks	68-70 %	2.0-2.5 %	13-15%	2.62	600-900	0.3 to 2.5 at 16000C/2h	1550-1600
80% Alumina Bricks	78-82 %	1.5-2.0 %	13-15%	2.7	950-1000	0.1 to 0.2 at 16500C/2h	1650-1700

SK-Series Fire Bricks

SK-Series refractory bricks are available in grades ranging from **SK-30 to SK-40**, covering a broad alumina composition from approximately **25% up to 82%**.

These products are supplied in substantial volumes across multiple international markets and are designed to meet diverse industrial requirements.

The range includes a wide selection of **regular and engineered shapes, such as Standard bricks, T-Shapes, Y-Shapes, Plates, Blocks, Tiles,** along with **special and customized shapes** as per application needs.

Technical Specification : SK Series Fire Bricks

	SK -30	SK-32	SK-34	SK-35	SK-36	SK-37	SK-38	SK-40
Al2O3， ≥	30%	32%	38%	45%	55%	65%	70%	82%
Fe2O3， ≤	4.20%	4.20%	4.20%	4.00%	3.20%	2.50%	2.50%	2%
Refractoriness，SK	30	32	34	35	36	37	38	40
Refractoriness	1670℃	1710℃	1750℃	1770℃	1790℃	1820℃	1850℃	1920℃
Temp. under load,0.2Mpa	1250	1350	1370	1420	1450	1480	1530	1600
Apparent Porosity， ≤	22-25%	21-23%	20-22%	19-20%	18-19%	16-18%	15-17%	15-17%
Bulk density，g/cm3	1.9-2.0	1.95-2.1	2.1-2.2	2.15-2.22	2.25-2.40	2.3-2.5	2.4-2.6	2.5-2.7
Cold crushing strength, Mpa, ≥	20	25	30	40	45	50	60	70

Insulating Bricks

CFI, HFI, and other **Insulating fire bricks** are produced with a strong focus on **consistent quality and thermal performance**.

Continuous process development and **focused R&D** efforts have led to significant improvements in insulation efficiency and product reliability.

These lightweight insulating fire bricks are characterized by **low density, good structural strength**, and **low thermal conductivity**, making them suitable for effective heat insulation.

They are widely used in **furnaces, boilers, and other high-temperature industrial applications** where thermal efficiency and energy conservation are critical.

Technical Specification : Insulating Bricks

		20- Grade	23- Grade	25- Grade	26- Grade	28- Grade
Service Temperature		1230℃	1250℃	1350℃	1430℃	1510℃
Al2O3， ≥		38%	45%	50%	55%	60%
Fe2O3， ≤		1%	1%	1%	1%	1%
Bulk Density(gm/cc) max.		0.64	0.77	0.615	0.86	0.96
Cold Crushing Strength, Mpa		1.2	1.8	2.25	2.2	2.2
Pyrometric Cone [ASTM] No.(min) CCSMpa		27	27	29	32	31
PLC at Service Temperature (˚C/3 hrs,max)		0.5	0.5	0.5	0.5	0.5
Thermal Conductivity (kcal/m/hr/˚C max)	200˚C	0.12	0.16	-	-	-
	400˚C	0.14	0.18	0.18	0.27	0.32
	600˚C	0.16	0.2	0.19	0.3	0.34
	800˚C	0.2	0.23	0.21	0.33	0.35
	1000˚C	0.24	0.26	0.23	0.36	0.38

Acid Proof Bricks

Acid Proof Bricks are designed to offer **high resistance** to concentrated acids, along with **low water absorption** and **strong mechanical strength**.

These bricks are produced using **fine-ground raw materials**, carefully formulated to achieve high density and structural integrity, and are fired at temperatures exceeding **1200°C.**

The resulting products provide excellent resistance to a wide range of **corrosive liquids and gases**, with known limitations against **hydrofluoric acids and strong hot alkalis.**

Such properties make them suitable for use in **chemical plants, processing units, and corrosion-prone industrial environments**.

Technical Specification : Acid Proof Bricks

PARAMETERS	CLASS-I	CLASS-II
Bulk Density (g/cm3)	>2.3	>2.28
Cold Crushing Strength (Kg/cm2)	> 900	> 700
Flexural Strength (Kg/cm2)	> 150	> 100
Thermal Conductivity (w/m*K)	≤0.65	≤0.45
SiO2	≥65 %	≥65 %
Water Absorption (%)	<2	<4
Acid Proof Rate (%)	≤98	≤97
Service Temperature (°C)	≤1200	≤1000

Magnesia Bricks

Magnesia Bricks are alkaline refractory materials characterized by a **high magnesium oxide (MgO)** content, with periclase as the primary crystalline phase.

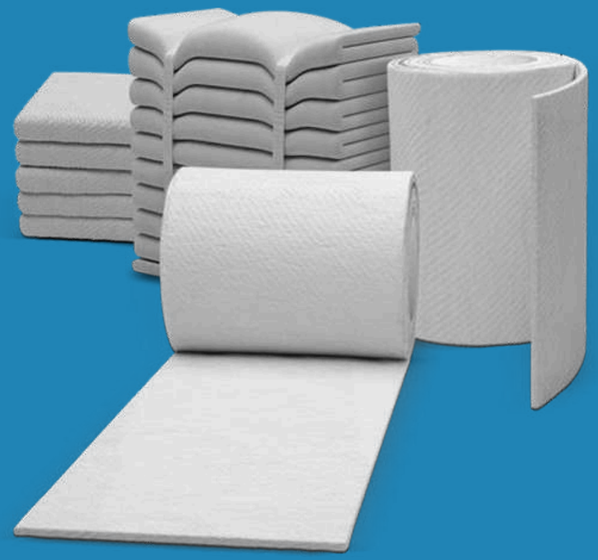
These bricks are broadly classified into **Burnt Magnesia Bricks** and **Chemically Bonded Magnesia Bricks**, each designed for specific operating conditions.

They exhibit excellent **high-temperature mechanical strength** and **good volume stability**, making them suitable for demanding thermal environments.

Magnesia Bricks are designed to perform at service temperatures up to approximately **1750°C** and are widely used in **Electric Arc Furnaces (EAF), rotary kilns, glass furnaces**, and other high-temperature industrial applications.

Technical Specification : Magnesia Bricks

PARAMETERS	MGO-90	MGO-85
MgO	≥90 %	≥85 %
CaO	≤3 %	≤3 %
Refractoriness Under Load 0.2MPa	≥1600 ℃	≥1500 ℃
Apparent Porosity	≤18 %	≤20 %
Cold Crushing Strength MPa	≥58.8	≥49
Linear Change On Reheating (1650℃, 2h)	≤0.5	≤0.6



Ceramic Fibers

Ceramic Fibers are offered as **fine and lightweight** insulation materials made mainly from **alumina and silica.**

They are suitable for **heat, electrical, and sound insulation** in **high-temperature** applications.

These fibers may be **crystalline or amorphous** and provide **reliable heat resistance.**

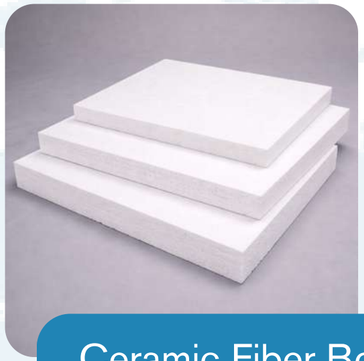
They are generally **white** in color and are available in forms such as **blankets, boards, papers, and modules.**

Ceramic fibers are used in **industries where lightweight insulation and high temperature performance are required.**

Ceramic Fibers

Product List

Ceramic Fiber Blanket



Ceramic Fiber Board

Ceramic Fiber Module

Ceramic Fiber Paper

Ceramic Fiber Bulk

Ceramic Fiber Rope

Ceramic Fiber Blanket

Technical Specification : Ceramic Fiber Blanket

Properties	1260°C (RTZ) Ceramic Blankets	1425°C (HTZ)Ceramic Blankets
Color	White	White
Classification Temperature	1260 °C	1425 °C
Max Service Temperature	1300 °C	1425 °C
Operating Temperature	1200 °C	1400 °C
Specific Heat (Btu/lbs/F)	0.27	0.27
Mean Fiber Diameters	2.6-3.4 Microns	2.6-3.4 Microns
Densities Lb/ft3 (kg/m3)	4 (64) , 6 (96) , 8 (128)	4 (64) , 6 (96) , 8 (128)
	Chemical Properties	
Al2O3	44-48 %	35-39 %
SiO2	53-57 %	47-51 %
ZrO2	-	14-18 %
Fe2O3	0.10%	0.10%
TiO2	0.30%	0.30%
	Tensile Strength (Kgf/m2) (ENV 1094-7)	
64 kg/m3	2500	2500
96 kg/m3	4500	4500
128 kg/m3	6000	6000
Linear Shrinkage – 24 Hours Max (ENV 1094-7)	3.0 % (1200 °C)	3.5 % (1400 °C)
	Thermal Conductivity in W/mk	
At 600 °C mean Temp.	Density- 96 Kg/m3	Density- 128 Kg/m3
RTZ (1200 °C)	0.14	0.12
HTZ (1400 °C)	0.14	0.12

Ceramic Fiber Blanket

AVAILABLE SIZE & DENSITY

Standard Density (kg/m3)

6,496,128,160

Standard Thickness

13 mm, 25mm, 38mm, 50 mm

Standard Size

610x7300mm, 610x3650mm, 1220x7300mm

* In addition to the above ranges, we can completely customize the product as per customer's request.

CHARACTERISTICS

- Low Thermal Conductivity
- Low Heat Storage
- High Tensile Strength
- Thermal Shock Resistance
- Light Weight Refractory Materials
- Sound Absorption
- Flexible and Easy to Cut and Install
- Contains no Organic Binder
- Contains no Asbestos
- No Curing on Dry Out Time Required

AREA OF APPLICATION

Industries	Application
Steel Industry	Heat Treating and Annealing Furnaces, Furnace Door Linings and Seals, Soaking Pit Convers and Seals, Furnace Hot Face Repairs, Reheat Furnaces , Ladle Covers.
Power Plants	Boiler Insulation, Boiler Doors, Reusable Turbine Covers, Pipe Covering.
Ceramic Industry	Kiln Car Insulation and Seals, Continuous and Batch Kilns
Other Applications	Insulation of Commercial Dryers and Covers, Veneer Over Existing Refractory, Stress Relieving Furnaces, Glass Furnace Crown Insulation, Fire Protection
Typical Applications	Refining and Petrochemical,Reformer and Pyrolysis Furnaces, Tube Seals, Gaskets and Expansion Joints, High Temperature Pipe, Duct and Turbine Insulation, Crude Oil Heater Linings.

Ceramic Fiber Board

Technical Specification : Ceramic Fiber Board		
Parameters	1260 °C (2300 °F)	1425 °C (2600 °F)
Al2O3	> 40	> 29
SiO2	< 60	< 55
ZrO2	-	> 10
Density (kg/m³)	280-320	280-320
Classification Temperature (°C)	1260	1425
Maximum Operating Temperature (°C)	1200	1350
Water Content (%)	≤1	≤1
Linear Shrinkage after heating (%)	1000°C*24h<2.5	1350°C*24h<2.5
Cold Crushing Strength (MPa)	0.12-0.2	0.12
Loss of Ignition (wt%)	≤7	≤7
Thermal Conductivity (W/mK)		
200°C	0.055	0.078
400°C	0.073	0.102
500°C	0.086	0.116
600°C	0.105	0.135

AVAILABLE GRADE AND SIZES

Grade (°C) : 1260 °C & 1425 °C

Thickcness (mm) : 10 mm to 100 mm

Standard (Width x Length) mm: 500x1000 mm, 600x1000 mm

Density (Kg/m3): 320-384 kg.m3

Packing

Thickcness (12 mm) = 12 PCs/Box, Thickcness (25 mm) = 06 PCs/Box

Thickcness (50 mm) = 04 PCs/Box, Thickcness (100 mm)= 02 PCs/Box

Ceramic Fiber Board

CHARACTERISTICS

- Excellent insulating performance.
- Excellent thermal stability.
- Excellent strength and hardness.
- Resistance to thermal shock.
- Good machinability.
- Low thermal conductivity, sound transmission, and heat storage.
- Uniform density and excellent resistance to thermal shock and chemical attack.
- Resists penetration by molten aluminum and other non-ferrous metals.
- Permits fast thermal cycling without cracking or spalling.
- Excellent rigidity and modulus of rupture make the boards strong and self-supporting, yet relatively lightweight and easy to cut or machine.

AREA OF APLICATION

- Expansion joint boards
- Refractory lining for industrial furnaces for walls, roofs, doors, stacks, etc
- Hot face layer for high velocity or abrasive furnace atmosphere
- Barrier against flame or heat
- Transfer of molten aluminum and other non-ferrous metals
- Back-up insulation for brick and monolithic refractories
- Combustion chamber liners, boilers, and heaters
- Industrial heat process equipment insulation
- Infra red element supports
- Board over blanket hot face lining
- High temperature boiler wall insulation
- Well suited for applications experiencing vibration, mechanical stress, and strong erosive forces

Ceramic Fiber Module

Technical Specifications: CERAMIC FIBER MODULE			
Description	STD Module	HP Module	HZ Module
Chemical Composition (%)			
Al2O3	≥44	≥45	≥34
SiO2	≥52	≥54	≥50
Fe2O3+TiO2	≤1.0	≤0.5	≤0.5
ZrO2	-	-	≥15
K2O+Na2O+Fe2O3	≤1.0	≤0.2	≤0.2
Physical Properties			
Density (kg/m³) avg	220	220	220
Classification Temperature (°C)	1260	1260	1430
Liner Shrinkage after Heating (%)	1000°Cx24h≤2.5	1100°Cx24h≤2.5	1350°Cx24h≤3.5
Thermal Conductivity (W/mK)			
400°C	0.09	0.101	0.118
500°C	0.119	0.12	0.149
600°C	0.152	0.175	0.172

DESCRIPTION

Ceramic fibre Modules are made from high quality needled Blanket, Edge staked (or) Folded with various anchors and other accessories to enable quick, convenient and efficient installation in most furnace linings. These prefabricated modules are designed to meet the thermal insulation requirements of high temperature furnaces.

Modules are made from ceramic fibre, pre-compressed to a specific density, and held in position with the suitable anchors/accessories.

Calcium Silicate Products

Calcium Silicate Insulation Boards are made from **calcium and silicon** and are designed for **high-temperature and fire-resistant** applications.

They are widely used for **pipes, thermal equipment, power plants, petrochemical units**, and **foundries** as thermal insulation and as back-up lining for **industrial furnaces.**

These boards are designed to provide high structural strength and can operate in systems up to **1200°F**. Made from **hydrous calcium silicate**, they are **inorganic, non-combustible**, and meet standard physical and thermal property requirements, while offering **corrosion resistance** on exposed surfaces of pipes and equipment.

Calcium Silicate Boards are available in **preformed block and preformed pipe** forms and are suitable for **chemical plants, refineries, steam power plants**, and **other industrial sectors** requiring reliable fire and thermal protection.

Technical Specification : Calcium Silicate Board

PARAMETERS	800- GRADE	1000- GRADE	1100 GRADE
Temperature, max service °C	800 °C	1000 °C	1100 °C
Average Bulk Density, dry	220-280 Kg/m3	240-280 Kg/m3	260-300 Kg/m3
Flexural strength, (min.)	300 KN/m2	350 KN/m2	600 KN/m2
Compressive Strength,reduction in thickness not to exceed under a load of:			
I) 415 KN/m2, dry %	5	5	5
II) 170 KN/m2, after 18 hrs immersion in water %	5	5	5
Heat Resistance, under soaking			
I) Linear Reheating Shrinkage (max.)- 12 Hours %	2 at 800 °C	2 at 950 °C	1.5 at 1050 °C
II) Loss In Mass (max.) %	14	12	10
III) Compressive Strength, reduction in thickness not to exceed under a load of 345 KN/m2 (max.) %	5	5	5
Thermal Conductivity at mean temperature (max.) W/m-K			
300 °C	0.078	0.078	0.076
400 °C	0.097	0.097	0.09
500 °C	-	0.118	0.11
550 °C	-	-	0.114
Moisture contents, by weight, (max.) %	5	5	5
Alkalinity (pH)	8 to 11	8 to 11	8 to 11

Calcium Silicate Board

AVAILABLE GRADE & SIZES
GRADES
800 °C Temeprature
1000 °C Temeprature
1100 °C Temeprature
Available Sizes (With 25,40,50,65,75,100 mm Thickness)
1000x500 mm
1000x610 mm
900x600 mm
500x150 mm
600x150 mm
450x150 mm
*** Special sizes and thicknesses can be manufactured upon request.**

INDUSTRIES	AREA OF APPLICATIONS
Aluminium Industry	Alumina Calcinators, Reduction Cells (Pots), Homogenizing and Holding Furnaces.
Cement Industry	Tertiary Air Ducts and Flue Gas Ducts, Preheater Cyclones, Precalcinators, Kiln Riser Ducts, Firing Hood, Grate Coolers.
Furnaces	Heat Treatment, Reheating and Annealing.
Ceramic and Glassware	Glass Melting Furnaces, Tunnel Kilns, Regenerators and Annealing Lehrs.
Sugar Industry	Boiler and Steam Pipelines.
Iron and Steel Industry	Flue Gas Ducts, Bustle Pipes, Reheat & Annealing Furnaces, Waste Heat Boiler, Roof Tops, Regenerators, Doors of Coke Oven Batteries, Lime Kilns, After Burning and Dust Settling Chambers of Sponge Iron Plants.
Power Plants	Boilers, Steam Pipelines, Turbines and Chimneys.
Passive Fire Protection	Heat Protection,Core Material for Fire Doors, Shielding around Fire Places and Stoves.
Fertilizer, Refinery and Petrochemical Industry	Reformer, Gas Crackers, Heaters, Boilers, Steam and Process Pipelines and Fuel Oil Lines.

Refractory Morter & Cement

Refractory Mortar is a specially prepared mix of **sand, calcium aluminate cement, fireclay, and additives.**

It is used for **laying and bonding firebricks** in areas exposed to **very high temperatures**, as well as for **repairing furnace linings.**

This mortar is suitable for use in **glass furnaces, blast furnaces, coke ovens, soaking furnaces, heat exchangers, boilers,** and **other industrial kilns.**

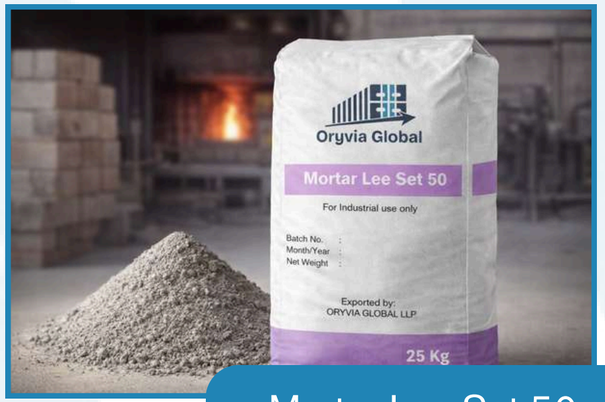
Key features include good **high-temperature strength, thermal stability, resistance to slag erosion,** and **long service life.**

Refractory Mortar

Product List

Fire Clay

IS-8 Mortar



Mortar Lee Set 50

70% Alumina Mortar

Refractory Mortar

Product List

90% Alumina Mortar

50% Alumina Cement

75% Alumina Cement

IS-8 Mortar

Technical Specifications: IS-8 Mortar

General Properties	Unit	Value
Nature of bond	-	Air Setting / Ceramic
Method of application	-	Mortar
Top of grains size	Mm	0.5
Water for Toweling consistency	%	15 – 27
Maximum safe application Temperature	℃	1200
Sintering Temperature	℃	950
CHEMICAL ANALYSIS		
Al_2O_3	%	35 – 40
Fe_2O_3	%	3.7 – 5.1
PHYSICAL / THERMAL PROPERTIES		
Retained Above Maximum Size	%	1.6
Pyrometric Cone Equivalent	Orton / ℃	12 / 1285
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	09 Months

Mortar Lee Set 50

Technical Specification : Mortar Lee Set-50		
General Properties	Unit	Value
Nature of bond	-	Chemical / Ceramic
Type	-	Alumina Mortar
Top of grains size	Mm	0.5
Water for Toweling consistency	%	21 – 28
Maximum safe application Temperature	℃	1450
Sintering Temperature	℃	1000
CHEMICAL ANALYSIS		
Al_2O_3	%	45 – 50
Fe_2O_3	%	3.9 – 4.9
PHYSICAL / THERMAL PROPERTIES		
Retained Above Maximum Size	%	1.5
Pyrometric Cone Equivalent	Orton / ℃	29 / 1624
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	09 Month

70% Alumina Mortar

Technical Specifications : 70% Alumina Mortar		
General Properties	Unit	Value
Nature of bond	-	Chemical / Ceramic
Type	-	Alumina Mortar
Top of grains size	mm	0.5
Water for Toweling consistency	%	21 – 28
Maximum safe application Temperature	°C	1700
Sintering Temperature	°C	1050
CHEMICAL ANALYSIS		
Al_2O_3	%	65 – 70
Fe_2O_3	%	2.9 – 3.5
PHYSICAL / THERMAL PROPERTIES		
Retained Above Maximum Size	%	1.4
Pyrometric Cone Equivalent	Orton / °C	31 / 1680
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	09 Month

90% Alumina Mortar

Technical Specifications : 90% Alumina Mortar		
General Properties	Unit	Value
Nature of bond	-	Chemical / Ceramic
Type	-	Alumina Mortar
Top of grains size	mm	0.5
Water for Toweling consistency	%	22 – 30
Maximum safe application Temperature	°C	1800
Sintering Temperature	°C	1100
CHEMICAL ANALYSIS		
Al_2O_3	%	87 – 90
Fe_2O_3	%	0.8 – 1.25
PHYSICAL / THERMAL PROPERTIES		
Retained Above Maximum Size	%	1.3
Pyrometric Cone Equivalent	Orton / °C	36 / 1807
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	09 Month

50% Alumina Cement

Technical Specification: 50% Alumina Cement	
CHEMICAL ANALYSIS	
Al2O3	: 50-52 % (+/- 1% min)
Fe2O3	: 3.5-4.0 % (Max.)
CaO	: 35-37 % (Max.)
CCS at 24Hrs	: 400-450 Kg/cm2 (Min)
CCS at 48HrsV110 Deg.C	: 450 - 500 Kg/cm2 (Min)
SETTING TIME	
Initial Setting Time	: 30 Minutes (Min)
Final Setting Time	: 400 Minutes (Max)
PCE	: 14 Orton Cone
MESH	: Passing 95% in 170 Mesh
Colour	: Off-White
Specific Surface Area	: 3500 Cm2/gm (Min.)
Note: All Testing done as per IS 4031-1988 at Room Temperature 25°C	
Relative Humidity	65 +/- 5%
Water Temperature	18-22 °C

75% Alumina Cement

Technical Specification : 75% Alumina Cement	
CHEMICAL ANALYSIS	
Al2O3	75 (+/- 1% min)
Fe2O3	0.4 % (Max.)
CaO	25 % (Max.)
CCS at 24Hrs	250 - 300 Kg/cm2 (Min)
CCS at 48HrsV110 Deg.C	450 - 500 Kg/cm2 (Min)
SETTING TIME	
Initial Setting Time	60 Minutes (Min)
Final Setting Time	300 Minutes
PCE	31
MESH	Passing 95% in 200 Mesh
Colour	Off-White
Specific Surface Area	4300 Cm2/gm
Note: All Testing done as per IS 4031-1988 at Room Temperature 25 °C	
Relative Humidity	65 +/- 5%
Water Temperature	18-22 °C

Monolithic / Castable

Refractory Castables are made from **refractory aggregates, powders, binders, and additives**. They are supplied ready for use after adding the required amount of water or other liquid.

These castables are used as **linings for rotary kilns, converters, heat treatment furnaces, metallurgical furnaces, chemical units**, and **other industrial furnace** areas.

The castables are processed using **controlled formulations and quality materials** to ensure **consistent performance and good shelf life.**

They offer good resistance to **heat, wear, and mechanical stress**, making them suitable for **long-term service** in demanding furnace applications.

Monolithic / Castable
Product List

Lee Cast Super

Lee Heat - A

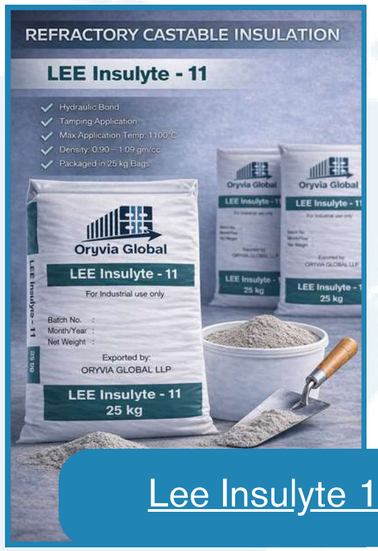
Lee Heat - K

Lee Heat - C

Monolithic / Castable

Product List

Lee Insulyte 7



Lee Insulyte 11

Low Cement LCC - 60

Low Cement LCC - 90

Lee Cast Super

Technical Specification : Lee Cast Super		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Vibration Casting
Top of grains size	mm	5
Water requirement for casting	%	10 – 11
Maximum safe application Temperature	°C	1450
	CHEMICAL ANALYSIS	
Al_2O_3	%	65 – 68
CaO	%	5.2 – 6.00
Fe_2O_3	%	4.0 – 5.5
	PHYSICAL / THERMAL PROPERTIES	
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	2.45 – 2.55
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	180 – 280
(After heating at 1400°C/3Hrs)		350 – 450
PLC		
(After heating at 1100°C/3Hrs)	%	±0.30
(After heating at 1400°C/3Hrs)		±1.25
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month

Lee Heat - A

Technical Specification : Lee Heat - A		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Vibration Casting
Top of grains size	mm	5
Water requirement for casting	%	12 – 16
Maximum safe application Temperature	°C	1700
CHEMICAL ANALYSIS		
Al_2O_3	%	85 – 88
CaO	%	4.4 – 5.7
Fe_2O_3	%	2.5 – 3.5
PHYSICAL / THERMAL PROPERTIES		
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	2.75 – 2.80
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	225 – 280
(After heating at 1400°C/3Hrs)		550 – 600
PLC		
(After heating at 1100°C/3Hrs)	%	±0.15
(After heating at 1400°C/3Hrs)		±1.15
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month

Lee Heat - K

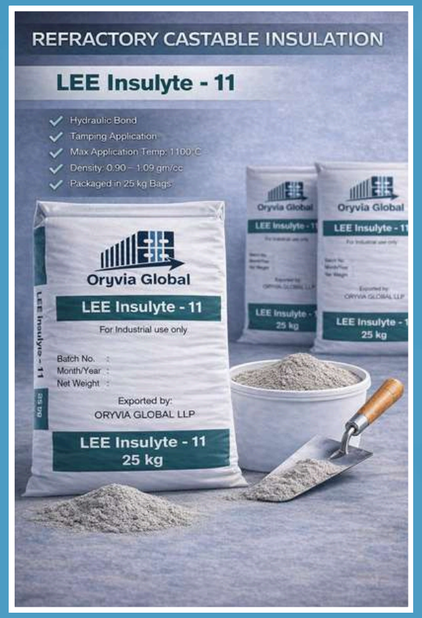
Technical Specification : Lee Heat - K		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Vibration Casting
Top of grains size	mm	5
Water requirement for casting	%	10 – 11
Maximum safe application Temperature	°C	1550
CHEMICAL ANALYSIS		
Al_2O_3	%	56 – 60
CaO	%	4.2 – 6.8
Fe_2O_3	%	1.25 – 1.5
PHYSICAL / THERMAL PROPERTIES		
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	1.20 – 1.30
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	180 – 280
(After heating at 1400°C/3Hrs)		450 – 500
PLC		
(After heating at 1100°C/3Hrs)	%	±0.12
(After heating at 1400°C/3Hrs)		±1.65
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month

Lee Heat - C

Technical Specification : Lee Heat - C		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Vibration Casting
Top of grains size	mm	5
Water requirement for casting	%	11 – 14
Maximum safe application Temperature	°C	1500
CHEMICAL ANALYSIS		
Al_2O_3	%	48 – 51
CaO	%	3.4 – 6.5
Fe_2O_3	%	1.5 – 2.5
PHYSICAL / THERMAL PROPERTIES		
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	1.15 – 1.20
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	180 – 280
(After heating at 1400°C/3Hrs)		400 – 450
PLC		
(After heating at 1100°C/3Hrs)	%	±0.25
(After heating at 1400°C/3Hrs)		±1.45
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month

Lee Insulyte 7

Technical Specification : Lee Insulyte 7		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Tamping
Top of grains size	mm	7
Water requirement for casting	%	37 – 45
Maximum safe application Temperature	°C	1150
CHEMICAL ANALYSIS		
Al_2O_3	%	33 – 38
Fe_2O_3	%	7.25 – 8.5
PHYSICAL / THERMAL PROPERTIES		
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	0.80 – 0.95
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	12 – 28
(After heating at 1400°C/3Hrs)		30 – 43
PLC		
(After heating at 1100°C/3Hrs)	%	-0.12
Refractoriness Orton/ oC	Orton/ °C	11/1273
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month



Lee Insulyte 11

Technical Specification : Lee Insulyte 11		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Tamping
Top of grains size	mm	7
Water requirement for casting	%	40 – 56
Maximum safe application Temperature	°C	1100
CHEMICAL ANALYSIS		
Al_2O_3	%	28 – 30
Fe_2O_3	%	7.45 – 8.76
PHYSICAL / THERMAL PROPERTIES		
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	0.90 – 1.09
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	12 – 26
(After heating at 1400°C/3Hrs)		32 – 45
PLC		
(After heating at 1100°C/3Hrs)	%	-0.13
Refractoriness Orton/ oC	Orton/ °C	10/1251
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month

Low Cement LCC - 60

Technical Specification : Low Cement LCC - 60		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Vibration Casting
Top of grains size	mm	5
Water requirement for casting	%	11 – 18
Maximum safe application Temperature	°C	1700
CHEMICAL ANALYSIS		
Al_2O_3	%	56 – 61
CaO	%	3.6 – 4.8
Fe_2O_3	%	2.4 – 3.6
PHYSICAL / THERMAL PROPERTIES		
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	2.50 – 2.55
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	225 – 280
(After heating at 1400°C/3Hrs)		450 – 550
PLC		
(After heating at 1100°C/3Hrs)	%	±0.20
(After heating at 1400°C/3Hrs)		±1.35
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month

Low Cement LCC - 90

Technical Specification : Low Cement LCC - 90		
General Properties	Unit	Value
Nature of bond	-	Hydraulic
Method of application	-	Vibration Casting
Top of grains size	mm	5
Water requirement for casting	%	10 – 19
Maximum safe application Temperature	°C	1800
CHEMICAL ANALYSIS		
Al_2O_3	%	87 – 90
CaO	%	3.5 – 4.7
Fe_2O_3	%	2.3 – 3.7
PHYSICAL / THERMAL PROPERTIES		
Dry Density (After drying at 120°C / 24Hrs)	gm/cc	2.85 –2.9
CCS		
(After drying at 120°C/24Hrs)	Kg/Cm2	220 – 270
(After heating at 1400°C/3Hrs)		550 – 650
PLC		
(After heating at 1100°C/3Hrs)	%	±0.32
(After heating at 1400°C/3Hrs)		±1.26
Packing	-	25 Kg HDPE Bag
Dry storage life for best performance	-	9 Month

Refractory
Liquid Mortar

Our air-set refractory mortar is a ready-to-use solution designed for lining refractory bricks and insulation bricks. It combines high-quality refractory materials and binders to deliver excellent adhesiveness at room temperature and superior bonding strength after sintering at **1200℃–1500℃.**

Applications:

Ideal for bonding insulation and refractory bricks, it is perfect for sealing and repairing furnaces, combustion chambers, boilers, stoves, flues, ducts, chimneys, and various other high-temperature refractory applications.

Key Features:

- Ready to use
- Easy application
- Wet refractory mortar
- High-temperature refractoriness

Usage Guidelines:

- For a thickness of **1.7–3.0 mm**, dry at **110℃** for **4 hours.**
- For uneven surfaces or thickness **3.1–5.0 mm**, first dry at **80℃** for **4 hours**, then increase to **110℃ for 4 hours**.
- Adhesive can be removed before drying without affecting performance.

Refractory Liquid Mortar

Technical Specification : Liquid Mortar		
General Properties	Unit	Value
Nature of bond	-	Ceramic
Method of application	-	Vibration Casting
Status	-	Ready Mix
Top of grains size	mm	0.5
Maximum safe application Temperature	℃	1400
	CHEMICAL ANALYSIS	
AL2O3	%	44 – 48
Na2O	%	8.0 – 9.5
SiO2	%	40.5 – 52.0
	PHYSICAL / THERMAL PROPERTIES	
Wet Density	gm/cc	1.80 – 2.1
Solid Content	%	74 – 76
Initial Setting Time **Final Setting Time**	Hrs	5 – 8 At working Temp
Packing	-	20 & 40 Kg Drum
Dry storage life for best performance	-	5 Month

Refractory
Boiler Bed Materials

Refractory Boiler Bed Material (Refractory Grog) is supplied for use in **Fluidized Bed Combustion (FBC) boilers.**

It is produced from selected **high-duty refractory aggregates** with **moderate alumina content**, **low iron**, and a **dense structure**, and is fired at temperatures up to **1400°C.**

This boiler bed material is designed to provide **smooth and stable fluidization**, supporting **efficient boiler operation and long service life.**

Key Features:

- Low iron and low alkali content
- Controlled and uniform particle size distribution
- Free from dust, fines, and oversized particles
- Consistent particle density and bulk density

Refractory Boiler Bed Materials

CHEMICAL PROPERTIES	VALUE
Alumina as Al2O3	30% - 60%
Silica as SiO2	50-60% Max.
Alkalies Na2O + K2O	Less Than 1%
Iron as Fe2O3	Less Than 2.5%
Titanium Oxide TiO	Less Than 1%

PHYSICAL PROPERTIES	VALUE
Particle Density	2.00 gm/cc
Bulk Density	1000-1100 kg/m³
Initial Deformation Temperature	> 1300° C
Maximum Particle Size	2.80 mm
Minimum Particle Size	0.85 mm

Calcined **Bauxite**

Calcined Bauxite is produced by heating **high-grade bauxite** at high temperatures, typically between **850°C and 1700°C**. This process removes moisture and increases the **alumina content**, improving its refractory properties.

While **raw bauxite** contains around **57–58% alumina**, calcined bauxite offers a **higher alumina** content of approximately **82–86%.** Calcination is carried out in rotary kilns, with temperatures adjusted based on the required application.

Calcined bauxite is widely used as a key raw material in the refractory industry. It is also used in **abrasives, steel processing, slag conditioning, refractory alumina cement, road construction, mineral wool production**, and **welding applications.**

Calcined Bauxite

PROPERTIES	GENERAL GRADE	SUPER GRADE	LOW FERRIC GRADE
AL2O3	70-75 %	80-85 %	75-80 %
Fe2O3	2.5-3.0 %	3.0-3.5 %	1.5-2 %
A.P	09-10 %	08-09 %	07-08 %
TiO2	≤ 3.8	≤ 3.8	≤ 3.8
SiO2	18.0-19.0 %	09.0-11.0 %	07.0-08.0 %
CaO+MgO	≤ 0.5 %	≤ 0.5 %	≤ 0.5 %
Na2O+K2O	≤ 0.25	≤ 0.25	≤ 0.20
H2O	0.005	0.005	0.005
LOI	0.0005	0.0005	0.0005
Bulk Density	2.8-3.0 gm/cm3	3.00-3.10 gm/cm3	3.1-3.2 gm/cm3

GRITS AVAILABLE
mm: 0-1, 1-3, 3-5, 0-30, 0-50
Mesh: -200, -325
Other sizes available on request

Contact Us

Email
faizan@oryviaglobal.com

Phone
+91 97373 30365

Website
www.oryviaglobal.com

Address
Wankaner, Gujarat, India - 363621

THANK YOU

www.oryviaglobal.com