



KUMAR CERAMICS PVT. LTD.



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Our company which runs by the name of Kumar Ceramics Pvt. Ltd. is a leading ceramics product manufacturer in India. The 'Kumar' brand name is synonymous with high quality and reliability and has established a substantial presence in the Indian market for over 40 years. Our materials have been widely accepted in various fields of manufacturing activities. In fact, we are the pioneer manufacturers of refractory combustion tubes, combustion boats and thermocouple tubes in India.



We offer the following range of ceramic products to cater to the varying needs of our customers.

- Thermocouple Protection Tubes
- Tubes for Heating Coil
- Rectangular Muffles
- Combustion Boats
- Kiln Furniture
- Ceramic Liners
- Burner Blocks
- Thermocouple Beads
- Crucibles
- Round Muffles
- Combustion Tubes
- Fibre Furnaces Refractory Supports
- Saggars
- Grinding Media
- Any other refractory products as per customer's requirements.

Our wide range of products mainly cater to the field of thermal processing in industries like Ceramics, Metallurgy, Chemical, Waste processing and Glass making Industries. Apart from these, they also find application in process equipments and scientific equipments.

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PROPERTIES OF KUMAR REFRACTORIES

Material Grade	K-45	K-60	K-80P	K-80	K-99
Composition	Sillimanite	Mullite	Corundum Mullite	Corundum Mullite	Recrystallized Alumina
Type according to Din - 40685	———	610	———	530	710
AL ₂ O ₃ in percentage	47	60	80(P)	80	99
Structure	Gas-tight	Gas-tight	Porous	Gas-tight	Gas-tight
Volume Density gms/cc	2.6	2.8	2.8	3.1	3.85
Apparent Porosity %	Nil - 0.1	Nil - 0.1	20 - 22	Nil - 0.1	Nil - 0.1
Melting Point	1700° C	1800° C	1900° C	1900° C	2000° C
Limit of Use	1450° C	1600° C	1750° C	1700° C	1900° C

CHARACTERISTICS OF SOME OF OUR MAIN PRODUCTS

Thermocouple Protection Tubes

High temperature processes generate the demand for reliable components. Our comprehensive range of Thermocouple tubes find application in these service conditions in the industrial furnace applications upto 1800°C. They provide protection against the corrosive atmosphere and protect the thermocouple sensors against mechanical damage. These tubes are fine grained, impervious and non-porous in nature and possess the following attributes:-

- ★ Thermal shock resistant
- ★ High temperature resistant
- ★ Corrosion resistant
- ★ High thermal conductivity

The choice of thermocouple tube material depends upon the environment of its application. Depending on their properties, alumina or mullite is used where they are best suited. Our mullite (silica/alumina) protection tubes have excellent thermal shock resistance and good mechanical strength characteristics. In oxidizing atmosphere, generally mullite would be a better choice. They provide a low-cost option in comparison to alumina.

Tubes for Heating Coil

They are mullite high performance materials used during the construction of furnaces with heating coils. Its features include-

- ★ Good mechanical strength (even in case of impervious, thin walled tubes)
- ★ Withstands temperature upto 1550°C
- ★ Good thermal shock resistance
- ★ High electrical resistivity even at high temperature
- ★ No reaction with heating element

The qualities of our products have been proven over the years and are availed by many recognized industries which build kilns and ovens. The standard sizes of these tubes can be delivered ex stock.

Combustion Boats

Our mullite compositions offer resistance to thermal shock and are effective in corrosive environments. They are used for melting metals and also for measuring carbon and sulphur percentage in steel in combustion tubes of muffle furnace of carbon and sulphur apparatus. The combustion boats are used in Metal Testing Laboratory & Steel Plants; Cast Iron, Alloy and Stainless Steel Industries. The temperature withstanding capacity of these combustion boats is 1600° C.

Crucibles

Alumina crucibles- Alumina is cost-effective and widely accepted owing to its versatility. Our recrystallized alumina crucibles are inert to hydrogen, carbon and refractory metals. These can be used for reacting chemicals, melting corrosive liquids and metals at operating temperature upto 1800°C in both oxidizing and reducing atmospheres. Hence we offer alumina crucibles and dishes ex stock in many standard shapes and sizes. They can also be custom made on request.

- ★ Withstands high temperature
- ★ Greater hardness
- ★ Good chemical stability
- ★ High melting point
- ★ Withstands chemical corrosion

Kyanite based crucibles- They find wide applications upto 1600°C in all metallurgical based industries. They are made out of high alumina refractory raw materials which offer excellent thermal shock resistance and mechanical strength.

Thermocouple Beads

These are made of pure alumina/ mullite compositions and are used to insulate thermocouple conductor wires inserted inside the thermocouple tubes. Our insulators have electric insulation properties even at higher temperatures (upto 1800°C) to give correct reading in the measuring instruments and prevent pollution of metals with silicon. The advantages of using these pure alumina thermocouple beads can be attributed to the following features-

- ★ Excellent electric insulation
- ★ Resistant to corrosive and oxidizing atmosphere
- ★ Great strength and rigidity
- ★ Withstands temperature upto 1800°C
- ★ Low thermal expansion
- ★ Non toxic
- ★ Resistant to wear and tear
- ★ Great compressive strength
- ★ Stability under highly demanding conditions

Since our insulators are manufactured using high purity ceramics, hence you can make thermocouples which are extremely accurate. A wide range of single bore, twin bore and four bore sleeves are available ex stock in standard sizes. Apart from them we can also provide variations like solid round rods and multibore beads in custom designs and sizes on request.