Mullite-Zirconia

Fused Zirconia Mullite

A co-fusion product of high purity alumina and zircon. Exhibits excellent abrasion and corrosion resistant properties in both steel and glass environments.

Produced from high-temperature electrofusion of Bayer process calcined alumina with low impurity zircon sand.

Major phases identified by X-ray diffraction as Mullite and dendrites of Zirconia with traces of glass. Massive crystals of Mullite are interwoven with pure Zirconia improving the corrosion resistance while retaining the high-temperature strength and creep resistance of Mullite.

Principal properties are:

- high thermal shock resistance
- low thermal expansion
- low glass content
- high resistance to corrosive elements
- low wettability by glass

Standard sizes are:
5 - 3 mm
3 - 1.5 mm
1.5 - 0.7 mm
- 0.7 mm
- 0.15 mm
- 0.08 mm
45µ
10µ
2µ

Chemical Analysis

Oxide	%
SiO_2	16.0
TiO_2	0.06
Al_2O_3	47.5
Fe_2O_3	0.06
CaO + MgO	0.08
$Na_2O + K_2O$	0.12
$ZrO_2 + HfO_3$	36.0

Free metallic iron levels are below the 0.02%
(lower for many size distributions)

Physical properties
Bulk density 3.65 g.cm $^{-3}$
Apparent porosity 1.8%
Thermal expansion (reversible) 0.45%
Refractoriness 1,750°C

Packaging options
25 kg nett paper sacks wrapped on a wooden pallet of 1200 kgs.
1000 - 1,500 kgs nett big-bags wrapped on a wooden pallet.
Application: Specialty materials
Product type: Consumables, Chemicals
Production scale: Commercial, Lab, Pilot
Search tags: Refractory, Raw material