

Magnesium Stabilized Zirconia Ceramic

For Ultra-High Temperature



Magnesia Stabilized Zirconia (MSZ) is a great refractory and insulating material due to high oxygen ion conductivity, high strength and toughness, and good thermal shock resistance. It has a clean melt at temperatures above 1900°C and above and is specially manufactured for melting superalloys and precious metals. Its superior thermal shock resistance to temperatures reaching up to 2200°C.

Advantages

- · High thermal shock resistance
- High wear-resistant and erosion-resistant
- · Metal corrosion resistance in high temperature
- Excellent non-wetting characteristics
- · High strength
- · Long service life
- The stabilizers and grains combination can be designed according to customer's using environment.



0°C-2200°C

Applicable Environment

Air, Vacuum, or Atmosphere Protection Environment







Application Field

High temperature melt flow control

Sizing nozzle, Ladle skateboard panel, Converter slag blocking slide plate and ring, etc.

Specialty glass manufacturing

Large size high content of zirconia and alumina ceramics, etc.

Metal powder industry

Setter plate, Gas atomizing nozzle, etc.

Precious metal smelting industry

Ceramic Crucibles, etc.





Artificial/Laser Crystal Ceramic Temperature Field

Rare earth composite oxide solid solution ceramic temperature field, etc.

Technical Indicators

Indicators	Item	Units	MSZ-H	MSZ-L	Custom
Main Composition	ZrO ₂	%	≥95	≥95	60–95
	Al2O ₃	%	≤0.2	≤0.2	0.2–20
	SiO ₂	%	≤0.4	≤0.4	0.2–1
	MgO	%	≤2.9	≤2.9	MgO/Y ₂ O ₃
	Fe ₂ O ₃	%	≤0.1	≤0.1	0.1–0.3
	TiO ₂	%	≤0.1	≤0.1	0.1–1.0
Physical	Color	ı	Yellow	Yellow	Yellow/White
	Density	g/cm ³	≤5.2	5.4-5.60	4.6–5.6
	Porosity	%	≤18.5	≤ 8	1–18.5

The stabilizers, grains combination and porosity can be designed according to customer's using environment.



Show Case

































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