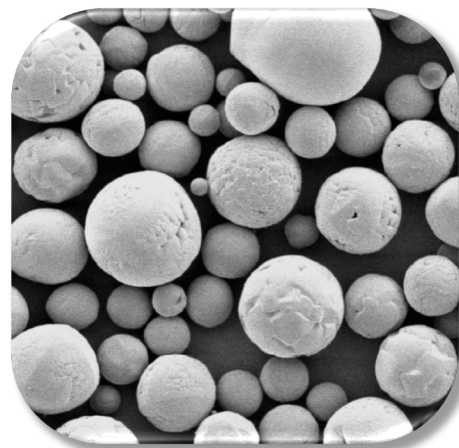


Thermal Spray Powders Technical Datasheet



Saint-Gobain Spinel (Magnesium Aluminate)

POWDER CHARACTERISTICS

Product	Nominal Size	Color	Morphology
#171	20-75 micron	White	Hollow sphere
#172	10-63 micron	White	Spherical agglomerate

TYPICAL CHEMISTRY

Product	Al ₂ O ₃	MgO	CaO	ZrO ₂	Fe ₂ O ₃	SiO ₂	Other
#171, #172	73%	26%	0.20%	0.20%	0.15%	0.10%	0.15%

PROPERTIES AND APPLICATIONS

Saint-Gobain Spinel is a magnesium aluminate designed with a spherical shape that produces more uniform build up rates without clogging or pulsing of the feed lines. In addition, the hollow particle morphology of Saint-Gobain #171 leads to more complete melting and higher deposit efficiencies. This material produces coatings with good dielectric strength, good wear resistance up to 1500°F (816°C), high thermal shock resistance, and resistance to molten aluminum.

Applications include coating parts requiring a high thermal shock resistance. Because of its resistance to wetting by molten aluminum, Saint-Gobain Spinel is used for surfacing of molds, ladles, ladle plugs, ladle lips, and other furnace parts. It is also commonly used for coating oxygen sensors for gas erosion resistance and gas permeability control.