ThermaSiC® 1545 Silicon Carbide

Agglomerated and Sintered Granules for Thermal Spraying with Atmospheric Plasma Spraying

Creates a porous wear-, corrosion- and temperature-resistant SiC coating

Powder Characteristics

Ceramic binder	Description	Shape
YAG	Agglomerated and sintered	Spheroidal
Binder content	**Size distribution**	**Tap Density**
~20vol%	-45 +15 µm	1,1-1,6 g/cm^3

Typical Spraying Parameters

Sample preparation	Spray rate	Coating thickness
Grit blast surface, 4-6µm Ra rec.	75-140µm per pass	100µm-2mm recommended

Sinplex / F4 (others available on request)

Spray distance	*Fuel*	*Powder feed rate*	*Traversal*
2-3” / 50-75mm	Argon + Hydrogen (35-70NLPM + 5-15NLPM)	15-50 g/m	400-1500mm/s, 4mm drop

Typical Coating Characteristics

Porosity	Microhardness	Tensile Strength
15-25%	700-1000 HV0.05	10-15 MPa
Porosity type	**Thermal Expansion**	**Thermal Conductivity**
Connected	~8 * 10^{-6}	3.6-4.2 W/m*K

Packaging By Agreement

Other Coating properties are highly dependent on substrate and spraying conditions