



-PRODUCT SPECIFICATION-

SilcoMax™ Coating

Surmet uses its innovative low temperature plasma process to deposit a variety of silicon carbide coatings for several industrial applications. The dense, micro-conformal, high purity coatings have very low residual stress, which makes them an ideal coating for semiconductor equipments as well as oxidation protection of ceramic matrix composites (CMCs) in moisture containing environments.

Property	Silicon Carbide
Substrate	Most metals and ceramics
Structure	Amorphous
Deposition Temperature, °C	<150
Use Temperature, °C	1000
Coating Thickness, μm	A few nm to over 60 μm
Substrate Size	Up to 36"
Substrate Geometry	Any shape including complex ones
Electrical Resistivity, Ω-cm	~10 ⁸
Hardness, DPHN	1600
Wear/Abrasion resistance	Very good
Corrosion Resistance	<ul style="list-style-type: none"> • Very good high temperature oxidation resistance in air up to 1000°C; • Excellent aqueous corrosion resistance including acids and alkalis
Applications	<ul style="list-style-type: none"> • Semiconductor equipment • Oxidation protective coatings especially in presence of moisture
Special Property	<ul style="list-style-type: none"> • Low residual stress, • Dense and micro-conformal, • High purity ensures contamination free operation.