GRAFSTAR®
TS5539 Graphite

Product Overview

GRATSTAR® TS5539 is a higher density, higher strength version of our Extruded CS family of materials. It has a resin impregnation for excellent properties as well as very low porosity and permeability.

Applications

- Ablatives

Sizes*

Standard Sizes (Large Rectangles)	
English	**Metric**
20 x 20 x 72 in	500 x 500 x 1830 mm

Typical Properties at Room Temperature**

Characteristic	English Units	WG	AG	Metric Units	WG	AG	SI Units	WG	AG
Bulk Density	g/cc	115		g/cc	1.84		g/cc	1.84	
Average Particle Size	inches	0.03		mm	0.76		mm	0.76	
SpecificResistance (AG)	10^{-4} Ω-in	3.0	3.3	μΩm	7.7	8.5	μΩm	7.7	8.5
Flexural Strength	psi	3200	2700	kg/cm^2	225	188	MPa	22	18
Young's Modulus	10^6 psi	1.42	1.21	kg/mm^2	997	840	GPa	9.8	8.3
Tensile Strength	psi	2560	2100	kg/cm^2	180	147	MPa	17	14
Compressive Strength	psi	7700	7600	kg/cm^2	541	534	MPa	53	52
Permeability	Darcy	0.008	0.009	Darcy	0.008	0.009	Darcy	0.008	0.009
Thermal Conductivity	BTU-ft/hr-ft^2-°F	81	72	W/mK	140	125	W/mK	140	125
C.T.E. (RT-to-100°C)	10^{-6}/°F	1.5	2.0	10^{-6}/°C	2.7	3.6	10^{-6}/ K	2.7	3.6
Hardness	Rockwell "R"	80	80	Rockwell "R"	80	80	Rockwell "R"	80	80
Ash Content	%	0.06		%	0.06		%	0.06	

Notes:
* Other sizes may be made available upon request.
** Properties listed are typical and cannot be used as accept/reject specifications
WG = With-the-Grain AG = Against-the-Grain

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