



## Technical Data Sheet 5084

# CSX Grade Graphite

## Product Overview

Densified prior to graphitization, Amsted Graphite Materials' GRAFSTAR™ CSX™ graphite is higher in strength and lower in permeability than CS™ graphite. It is a material for applications requiring higher densities, better mechanical properties, and less porosity than the CS™ material. CSX™ graphite has a particularly low ash content which enhances its oxidation resistance.

## Applications

- Casting molds and furnace parts for hot metal
- Resistance heating
- Powder metallurgy
- Crucibles for melting and alloying
- Boats and trays for sintering applications
- Quartz processing

## Sizes\*

- 8"-13" diameter rounds
- 200 - 330 mm diameter rounds

## Typical Properties at Room Temperature\*

Characteristic	Unit	WG	AG	Unit	WG	AG	Unit	WG	AG
Density	lbs/ft <sup>3</sup>	111		g/cm <sup>3</sup>	1.78		g/cm <sup>3</sup>	1.78	
Maximum Particle Size	inches	0.030		mm	0.76		mm	0.76	
Specific Resistance	10 <sup>-4</sup> Ωin	2.8	3.5	μΩm	7.0	9.0	μΩm	7.0	9.0
Flexural Strength	psi	3480	2900	kg/cm <sup>2</sup>	245	204	MPa	24	20
Young's Modulus	10 <sup>6</sup> psi	1.59	1.20	kg/mm <sup>2</sup>	1118	844	GPa	11.0	8.3
Tensile Strength	psi	2755	2175	kg/cm <sup>2</sup>	194	153	MPa	19	15
Compressive Strength	psi	7974	7974	kg/cm <sup>2</sup>	561	561	MPa	55	55
Permeability	Darcy	0.02	0.02	Darcy	0.02	0.02	Darcy	0.02	0.02
Hardness	Rockwell "R"	93		Rockwell "R"	93		Rockwell "R"	93	
C.T.E. (to 100 °C)	10 <sup>-6</sup> /°F	1.4	2.0	10 <sup>-6</sup> /°K	2.5	3.6	10 <sup>-6</sup> /°K	2.5	3.6
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	98	75	W/mK	170	130	W/mK	170	130
Ash Content	ppm	1200		ppm	1200		ppm	1200	

**Notes:**

\* Properties listed are typical and cannot be used as accept/reject specifications