

# GRAFTech International

## ATR™ Graphite

GrafTech International is a global leader in graphite and carbon products. We enable customer leadership better and faster than our competition, through the creation, innovation and manufacture of carbon and graphite material science based solutions.

### Grade ATR™ Graphite

Isostatically molded ATR™ graphite is a lower density version of grade ATJ™ graphite. It is a fine grain, high strength material that can be machined to precise tolerances and a fine surface finish.

### Typical Applications

- Rocket Motor Nozzles
- Mold Cores
- Hot Pressing Molds
- Plungers & Rams

### Sizes

**Inches**

16" x 16" x 65" rectangles  
 12" x 25" x 80" rectangles  
 8" - 24" diameter x 72" long rounds

**MM**

406 x 406 x 1651 mm rectangles  
 305 x 635 x 2032 mm rectangles  
 203-610 mm diameter x 1829 long rounds

### Typical Properties at Room Temperature

	<u>ENGLISH</u>	<u>WG</u>	<u>METRIC</u>	<u>WG</u>	<u>SI</u>	<u>WG</u>
Density	lbs/ft <sup>3</sup>	105	g/cm <sup>3</sup>	1.68	g/cm <sup>3</sup>	1.68
Maximum Particle Size	Inches	0.001	mm	0.025	mm	0.025
Specific Resistance	10 <sup>-4</sup> Ω in.	4.92	μΩm	12.5	μΩm	12.5
Flexural Strength	psi	3700	kg/cm <sup>2</sup>	260	MPa	26
Young's Modulus	10 <sup>6</sup> psi	1.16	kg/mm <sup>2</sup>	815	GPa	8.0
Tensile Strength	psi	3000	kg/cm <sup>2</sup>	210	MPa	21
Compressive Strength	psi	8000	kg/cm <sup>2</sup>	560	MPa	55
Permeability	Darcy	0.015	Darcy	0.015	Darcy	0.015
Hardness	Rockwell "L"	45	Rockwell "L"	45	Rockwell "L"	45
C.T.E. (to 100 °C)	10 <sup>-6</sup> /°F	1.4	10 <sup>-6</sup> /°C	2.5	10 <sup>-6</sup> /K	2.5
Thermal Conductivity	BTU-ft/hr ft <sup>2</sup> °F	58	W/mK	100	W/mK	100
Ash Content	%	<0.09	%	<0.09	%	<0.09

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GT-5071  
Rev. 2

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