



**Ohio Carbon Blank**  
 GRAPHITE MACHINING EXPERTS

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ISO-9001:2015 Certified Company

## Graphite Material Datasheet

# AR-12

*AR-12 is a superfine grain grain, molded graphite material, and the properties are isotropic.*

### Common Material Applications:

*EDM Applications [Roughing + Finishing], Crucibles, Ingot Molds, Extrusion Dies, Punch Dies, Furnace Components, Glass Making, Tooling, Fuel Cells, & Batteries*

### Material Properties & Characteristics

Grain Type:	Superfine Grain
Form Process:	Molded
Special Treatments:	None
Avg Particle Size:	.000354" [9.0 μ]
Bulk Density:	1.83 g/cm <sup>3</sup>
Shore Hardness:	65
Electrical Resistivity:	480 μΩ-inch
Flexural Strength:	8,000 lbs/in <sup>2</sup>
Compressive Strength:	18,400 lbs/in <sup>2</sup>
Tensile Strength:	5,000 lbs/in <sup>2</sup>
Young's Modulus:	10.1 GPa
Thermal Conductivity:	112.4 W/m•°K
Thermal Expansion:	3.28 x10 <sup>-6</sup> /°F [752 - 932° F]
Ash Content:	500 ppm
Porosity:	8.0%
Max Inert Temperature:	5,000° F
Max Block Size:	12 x 24 x 40

*all material specifications are considered typical from the manufacturers and/or distributors*

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