

Isostatic Graphite Blocks & Rounds

Formed by means of CIP (cold isostatic pressing) technique, isostatic graphite is characterized by its homogeneous structure and excellent isotropic electrical, thermal and mechanical properties. Sometimes it is purified in special-designed graphitization furnace to remove non-carbonaceous impurities. It is widely used in a variety of industrial and scientific engineering as a structural and/or functional material.

Applications

- Molds in continuous casting systems for making shaped steel, cast iron, copper
- Sintering molds for cemented carbides, diamond tools and electronic components
- Moulds for making shaped glass
- Crucibles for melting precious metals or alloys
- Electrodes for EDM (Electronic Discharge Machine)
- Heating elements, heat shields, crucibles, boats in furnaces for pulling monocrystalline silicon or optical fibers
- Anodes for production of manganese dioxide, metallic magnesium and rare metals

Properties

- Fine grain
- Homogeneous structure and appropriate machinability
- Isotropic properties
- High density and high mechanical strength
- High thermal and chemical resistance

- High resistance to thermal shock (low thermal expansion)
- Proper electrical conductivity
- High oxidation resistance
- Self-lubricity

Standard dimensions

Blocks	Length x Width x Thickness (mm) 550×300×160, 770×400×180, 360×360×400, 400×400×400, 400×400×500, 400×400×600
Rounds	Diameter (mm) 130, 220, 250, 300, 350, 400, 450, 500 Thickness (mm) 280, 320, 400, 450, 500, 600, 650

*Other dimensions are available on customer request

Specifications

Specifications	Unit	Value
Bulk Density	g/cm ³	1.70-1.88
Specific Resistance	$\mu \Omega \cdot m$	8.0-15.0
Compressive Strength	MPa	35-80
Bending Strength	MPa	20-45
Shore Hardness		30-70
C.T.E. (100-600°C)	$\times 10^{-6}/^{\circ}C$	2.5-5.5
Ash (Normal Grade)	%	0.05-0.2

Ash (purified)	ppm	30-50
Maximum Grain Size	mm	0.044-0.8

Note: The values mentioned in this table are only for reference and not committed to any contract.