

EXTRUDED GRAPHITE

BASIC PROPERTIES

- Good resistance to thermal shocks
- Good dimensionnal stability
- Good thermal conductivity
- Good electrical conductivity
- High density and high mechanical strength
- Low impurity, so high resistance to oxidation

APPLICATIONS

Crucibles and incinerating dish
Furnace equipments
Suceptors for induction furnaces
Heat exchanger
Moulds

ISOSTATIC MOLDED GRAPHITE

BASIC PROPERTIES

- Thin grain
- High mechanical strenght
- Machinable with high precision
- Can obtain very good surface estate
- High thermal shock resistance due to:
 - A low thermal expansion coefficient
 - A high thermal conductivity
 - A low elastic modulus

APPLICATIONS

Sintering molds
Casting dies
Nozzles
Tools for composites shaping
Electroerosion

HIGH GRADE ISOSTATIC MOLDED GRAPHITE

BASIC PROPERTIES

- Electroerosion
- Semi-conductors
- Diamond sintering
- Glass industry
- Chemistry

APPLICATIONS

Isotrope structure (perfect homogeneity)
Fine grain size
High density
Consistency of mechanical and electrical characteristics due to an advanced technology manufacturing process

MATERIAL		EXTRUDED GRAPHITE	ISOSTATIC MOLDED GRAPHITE	HIGH GRADE ISOSTATIC GRAPHITE
Chemical formula		C	C	C
Aspect / color	Black	Black	Black	Black
Mechanical		Measuring unit		
Hardness	Mohs	1,0-1,5	-	65
Young modulus	GPa	4,8	-	-
Young modulus	MPa	-	-	9300
Young modulus perpendicular to the grain	MPa	8000	8500	-
Young modulus in grain direction	MPa	1400	1000	-
Compression resistance	MPa	96	-	-
Compression resistance perp. to the grain	MPa	-	70	-
Compression resistance in grain direction	MPa	44/55	68	-
Tensile strength	MPa	4,8	-	-
Flexion resistance	MPa	50	-	-
Flexion resistance perp. to the grain	MPa	-	25	-
Flexion resistance in grain direction	MPa	15/20	30	-
Traction resistance perp. to the grain	MPa	-	-	25
Traction resistance in grain direction	MPa	-	30	-
Physical				
Neutral atmosphere use limit temperature	°c	3650	3650	3650
Pores diameters	10-6m	-	-	-
Opened porosity	%	15/20	19/03	-
Density	g/cm ²	2,25	-	-
Absolute density	g/cm ³	1,60/1,75	-	1,77
Bulk density	g/cm ³	-	1,76	-
Water absorption	%	0,5-3	-	-
Structure		Hexagonal	Hexagonal	Hexagonal
Electrical				
Electrical resistivity 20°C	Wcm	7x10 ³	-	8,8
Thermal				
Thermal conductivity	W/m.°K	-	-	93

*These values are for informational purposes only and do not bind company's responsibility.