

Minteq Pyrogenics Group

Pyroid[®] Pyrolytic Graphite for the Glass Industry

Pyroid pyrolytic graphite material is a universal glass-handling material having exceptional heat resistance, strength, and durability with non-absorption characteristics to perform under the most rigorous conditions without damaging the glassware.

The material offers:

- Exceptionally high purity > 99.999%
Benefit: No marring of glass surfaces
- Exceptional high oxidation resistance
Benefit: Extremely long tool life
- High thermal conductivity
Benefit: Exception tolerance to thermal shock

Ideal for all types of glass including:

- Soda-lime
- Borosilicate
- Lead glass
- Aluminosilicate glass
- Fused silica

Found in such applications as

- Fine stemware
- Pharmaceutical packaging
- Microscopy
- LED
- Photovoltaic
- Specialty glass tubing



Property	Direction*	Metric Units	English Units
Density	---	2.19 g/cc	136 lb/ft ³
Flexural Strength			
Room Temperature	a	840 kg/cm ²	12,000 psi
2750°C	a	3,500 kg/cm ²	50,000 psi
Compressive Strength			
Room Temperature	a	1,200 kg/cm ²	17,500 psi
	c	2,500 kg/cm ²	38,011 psi
Shear Strength			
Room Temperature	a	140 kg/cm ²	2,000 psi
Coefficient Thermal Expansion			
Room Temperature	a	0.6x10 ⁻⁶ cm/cm°C	1.0x10 ⁻⁶ in/in°F
2200°C	a	0.68x10 ⁻⁶ cm/cm°C	1.3x10 ⁻⁶ in/in°F
Room Temperature	c	6.8x10 ⁻⁶ cm/cm°C	12.0x10 ⁻⁶ in/in°F
2200°C	c	8.0x10 ⁻⁶ cm/cm°C	14x10 ⁻⁶ in/in°F
Thermal Conductivity			
Room Temperature	a	440 W/m ² K	255 BTU/(hr ft ²)(°F/ft)
1650°C	a	114 W/m ² K	66 BTU/(hr ft ²)(°F/ft)
Room Temperature	c	1.73 W/m ² K	1.00 BTU/(hr ft ²)(°F/ft)
3000°F	c	1.30 W/m ² K	0.75 BTU/(hr ft ²)(°F/ft)
Electric Resistivity			
Room Temperature	a	500 μΩcm	
1650°C	a	200 μΩcm	
Room Temperature	c	0.6 Ωcm	
1650°C	c	0.22 Ωcm	
Scleroscope Hardness			
Room Temperature	a	101	101
	c	83	83
Oxidation Threshold		650°C	1200°F
Permeability		Helium Leak Tight at 10-6 mmHg	

*a: Along basal planes (across surface)
c: Through basal planes (through thickness)

For Details or Samples

Call, FAX or Email

Toll Free: 800-962-8586 FAX: 610-250-3325



MiNTEQ