

## Schott Dark ROBAX® Glass Ceramic

Category : Ceramic , Glass , Glass Ceramic , Optical

### Material Notes:

Dark ROBAX® is an infra-red transparent glass-ceramic having virtually zero thermal expansion and sufficient mechanical resistance required for all standard applications. It is produced in rolled sheets with one surface flat and one surface textured with nubs. As a result of its extremely low thermal expansion, Dark ROBAX® can be subjected to extreme temperature differences. Even when used in high temperature conditions, Dark ROBAX® maintains excellent stability of form. Dark ROBAX® can be further processed mechanically using all of the normal methods of glass processing. Applications: Dark ROBAX® possesses a high degree of resistance against thermal stresses and chemical surface attacks. Its diverse range of applications include: high temperature vision windows for UV and visual light blocking, heat insulators, commercial heating equipment, and electronics. Information provided by SCHOTT North America.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Schott-Dark-ROBAX-Glass-Ceramic.php](http://www.lookpolymers.com/polymer_Schott-Dark-ROBAX-Glass-Ceramic.php)

Physical Properties	Metric	English	Comments
Density	2.59 g/cc	0.0936 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	95.0 GPa	13800 ksi	
Flexural Strength	85.0 - 135 MPa	12300 - 19600 psi	
Poissons Ratio	0.25	0.25	
Shear Modulus	38.0 GPa	5510 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	-0.150 - 0.150 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	-0.0833 - 0.0833 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 700 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 1290 $\text{Å}^\circ\text{F}$	
Specific Heat Capacity	0.810 J/g- $\text{Å}^\circ\text{C}$	0.194 BTU/lb- $\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 100 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 212 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	1.60 W/m-K	11.1 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	
	@Temperature 100 $\text{Å}^\circ\text{C}$	@Temperature 212 $\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	700 $\text{Å}^\circ\text{C}$	1290 $\text{Å}^\circ\text{F}$	100 to 10,000 hr, depends on temperature gradient
	800 $\text{Å}^\circ\text{C}$	1470 $\text{Å}^\circ\text{F}$	<100 hr, depends on temperature gradient

Optical Properties	Metric	English	Comments
IR Transmittance	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 200000 ohm-cm	>= 200000 ohm-cm	
	@Temperature 350 Â°C	@Temperature 662 Â°F	
	>= 5.00e+6 ohm-cm	>= 5.00e+6 ohm-cm	
	@Temperature 250 Â°C	@Temperature 482 Â°F	
Dielectric Constant	1.00e+8 ohm-cm	1.00e+8 ohm-cm	
	@Temperature 170 Â°C	@Temperature 338 Â°F	
Dissipation Factor	7.8	7.8	
	0.020	0.020	

## Contact Songhan Plastic Technology Co.,Ltd.

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