

Evonik Corporation Plexiglas® GS 249 Cast Acrylic

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic, Cast

Material Notes:

Description: PLEXIGLAS® GS 249 is another cast acrylic specially developed to meet even higher demands by the aviation industry, but is additionally crosslinked. As compared with uncrosslinked acrylic, it offers higher resistance to media that cause stress cracking and increased heat distortion resistance. PLEXIGLAS® GS 249 is also excellently suited for stretching, which makes it possible to improve its properties even further over the unstretched state. Typical applications are cabin windows in civilian aircraft, glazing for pressurized aircraft cabins, cockpit glazing, canopies and windshields. Information provided by degussa.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Evonik-Corporation-Plexiglas-GS-249-Cast-Acrylic.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183, ASTM D792
Water Absorption	0.20 %	0.20 %	MIL-P-8184
Water Absorption at Saturation	2.1 %	2.1 %	MIL-P-8184

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	80.0 MPa	11600 psi	ISO 527-2/1B/5, ASTM D638
Elongation at Break	5.0 %	5.0 %	ISO 527-2/1B/5, ASTM D 638

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 µm/m-°C	38.9 µin/in-°F	EN 2155-12, ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Maximum Service Temperature, Air	113 °C	235 °F	ISO 71-2Ae, ASTM D648
Vicat Softening Point	118 °C	244 °F	ISO 306-B-50
Flame Spread	15.2 mm/min	0.600 in/min	Fire Rating; ASTM D635
	20.0 mm/min	0.787 in/min	

Optical Properties	Metric	English	Comments
Refractive Index	1.49	1.49	ISO 489, ASTM D542
Haze	1.5 %	1.5 %	Original State; EN 2155-9, ASTM D1003
	2.2 %	2.2 %	after artificial weathering; EN 2155-9, ASTM D1003

Transmission Visible Optical Properties	89 % Metric	89 % English	after artificial weathering; ASTM D1003 Comments
	91 %	91 %	Original State; EN 2155-5, ASTM D1003
UV Transmittance	<= 1.0 % @Wavelength 290 - 330 nm	<= 1.0 % @Wavelength 290 - 330 nm	

Descriptive Properties	Value	Comments
Angular Deviation	Max 4 minutes	EN 2155-7 (ASTM D637)

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