

Evonik CYRO ACRYLITE PLUS® ZK-6 Impact Acrylic Polymer

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic, General Purpose, Molded , Acrylic, Impact Modified, Molded

Material Notes:

ACRYLITE PLUS® ZK-6 impact acrylic polymer is an amorphous, impact-modified thermoplastic molding and extrusion compound based on polymethyl methacrylate (PMMA). Typical properties of ACRYLITE PLUS® impact acrylic polymers are high weather resistance, high light transmission, improved resistance to stress cracking, good melt flow rate, and easy to color. The special properties of ACRYLITE PLUS ZK-6 polymer are high impact/break resistance and strength, low melt flow rate, medium heat resistance, AMECA listed as ZK6 (x), and FDA food contact use. Application: Used for injection molded parts and extruded sheet. Information Provided by Evonik CYRO

Order this product through the following link:

http://www.lookpolymers.com/polymer_Evonik-CYRO-ACRYLITE-PLUS-ZK-6-Impact-Acrylic-Polymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.16 g/cc	1.16 g/cc	ASTM D792
Bulk Density	0.710 g/cc	0.0257 lb/in ³	ASTM D1895
Water Absorption at Saturation	0.30 %	0.30 %	ASTM D570
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	ASTM D955
Melt Flow	1.7 g/10 min @Load 3.80 kg, Temperature 230 °C	1.7 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	40	40	ASTM D785
Tensile Strength at Break	43.4 MPa	6300 psi	ASTM D638
Elongation at Break	55 %	55 %	ASTM D638
Elongation at Yield	5.0 %	5.0 %	ASTM D638
Tensile Modulus	1.52 GPa	220 ksi	ASTM D638
Flexural Strength	59.3 MPa	8600 psi	ASTM D790
Flexural Modulus	1.52 GPa	220 ksi	ASTM D790
Izod Impact, Notched	0.374 J/cm @Temperature 0.000 °C	0.700 ft-lb/in @Temperature 32.0 °F	1/4" bar; ASTM D256
	0.587 J/cm @Temperature 23.0 °C	1.10 ft-lb/in @Temperature 73.4 °F	1/4" bar; ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	72.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	40.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
	@Temperature 0.000 - 156 $^{\circ}\text{C}$	@Temperature 32.0 - 312 $^{\circ}\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	Annealed; ASTM D648
	@Thickness 6.35 mm	@Thickness 0.250 in	
Vicat Softening Point	93.9 $^{\circ}\text{C}$	201 $^{\circ}\text{F}$	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	$\leq 1.0\%$	$\leq 1.0\%$	ASTM D1003
Yellow Index	$\leq 0.30\%$	$\leq 0.30\%$	ASTM D1925
Transmission, Visible	91.5 %	91.5 %	ASTM D1003

Processing Properties	Metric	English	Comments
Middle Barrel Temperature	232 - 249 $^{\circ}\text{C}$	450 - 480 $^{\circ}\text{F}$	
Melt Temperature	232 - 249 $^{\circ}\text{C}$	450 - 480 $^{\circ}\text{F}$	
Mold Temperature	43.3 - 82.2 $^{\circ}\text{C}$	110 - 180 $^{\circ}\text{F}$	
Drying Temperature	82.2 $^{\circ}\text{C}$	180 $^{\circ}\text{F}$	
Dry Time	3 - 4 hour	3 - 4 hour	

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