

Product Information

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ACRYLITE PLUS® ZK3HR impact acrylic polymer

Product Profile:

ACRYLITE PLUS® ZK3HR 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
- easy to color

The special properties of ACRYLITE PLUS ZK3HR polymer are:

- good impact/break resistance and strength
- low melt flow rate
- high heat resistance

Application:

Used for injection molded parts.

Examples:

Luminaries, fountain pens, appliance housings, appliance lenses and housewares.

Processing:

ACRYLITE PLUS ZK3HR polymer can be processed in injection molding machines and extrusion lines with 3- zone general purpose screws.

Packaging:

Available in 1500 lb. gaylord boxes; other packaging available on request.

Properties:

	Parameter	Unit	ASTM-Standard	ACRYLITE PLUS® ZK3HR polymer
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	11900 [77.2]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.48 [3.3]
Tensile Elongation @ Yield		%	D 638	5
Tensile Elongation @ Break		%	D 638	15
Flexural Strength		psi [MPa]	D 790	15040 [104]
Flexural Modulus		x10 ⁶ psi [GPa]	D 790	0.32 [2.2]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	0.45 [23.4]
Notched Izod	¼" bar @0°C	ft-lb/in [J/m]	D 256	0.4 [20.8]
Rockwell Hardness		M Scale	D 785	92
Thermal Properties				
Vicat Softening Point		°F [°C]	D 1525	217 [103]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	198 [92]
Coeff. of Linear Therm. Expansion	32 – 312°F	in/ in/°F	D 696	0.00004
Coeff. of Linear Therm. Expansion	0 – 100°C	mm/mm/°C	D 696	0.000072
Rheological Properties				
Melt Flow Rate	230°C & 3.8 kg	g/10min	D 1238	3.2
Optical Properties				d = 3.2 mm
Light Transmission		%	D 1003	>90
Haze		%	D 1003	<2
Yellowness Index			D 1925	0.3
Other Properties				
Specific Gravity			D 792	1.17
Water Absorption		% Max	D 570	0.3
Mold Shrinkage		in/in, mm/mm	D 955	0.004 – 0.007
Bulk Density		g/cc	D 1895	0.71
Recommended processing conditions				
Predrying Temperature		°F [°C]		180 [82]
Predrying Time		hour		3 – 4
Melt Temperature		°F [°C]		450 – 480 [232 – 250]
Cylinder Temperature		°F [°C]		450 – 480 [232 – 250]
Mold Temperature		°F [°C]		110 – 180 [49 – 82]

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

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Evonik Cyro LLC 379 Interpace Parkway, Parsippany, NJ 07054 USA
 Phone: 800-631-5384 Email: cyro.polymer@evonik.com www.cyro.com
 Technical Support: visit the TechKnowlogy Center at cyro.custhelp.com

