

Product Information

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ACRYLITE PLUS® ZK-D impact acrylic polymer

Product Profile:

ACRYLITE PLUS® ZK-D 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 ZK-D polymer are:

- High impact/break resistance and strength
- medium melt flow rate
- medium heat resistance

Application:

Used for injection molded parts, extruded and co-extruded sheet and profiles.

Examples:

Applications involving thin walls and long flow paths, parts requiring accurate mold surface reproduction, wind deflectors, point-of-purchase displays, light covers, fountain pens, appliance housings, appliance lenses and housewares.

Processing:

ACRYLITE PLUS ZK-D 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® ZK-D polymer
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	6400 [44.1]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.23 [1.6]
Tensile Elongation @ Yield		%	D 638	5
Tensile Elongation @ Break		%	D 638	40
Flexural Strength		psi [MPa]	D 790	9400 [64.8]
Flexural Modulus		x10 ⁶ psi [GPa]	D 790	0.23 [1.6]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	1.1 [58.1]
Notched Izod	¼" bar @0°C	ft-lb/in [J/m]	D 256	0.65 [34.1]
Rockwell Hardness		M Scale	D 785	33
Thermal Properties				
Vicat Softening Point		°F [°C]	D 1525	201 [94]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	190 [88]
Coeff. of Linear Therm. Expansion	32 – 312°F	in/ in/°F	D 696	0.000052
Coeff. of Linear Therm. Expansion	0 – 100°C	mm/mm/°C	D 696	0.0000936
Rheological Properties				
Melt Flow Rate	230°C & 3.8 kg	g/10min	D 1238	5.8
Optical Properties				d = 3.2 mm
Light Transmission		%	D 1003	91.5
Haze		%	D 1003	1
Yellowness Index			D 1925	0.3
Other Properties				
Specific Gravity			D 792	1.16
Water Absorption		% Max	D 570	0.3
Mold Shrinkage		in/in, mm/mm	D 955	0.003 – 0.006
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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