

## Product Information

Page 1 of 2

### ACRYLITE PLUS® ZK5HG impact acrylic polymer

#### Product Profile:

ACRYLITE PLUS® ZK5HG 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 ZK5HG polymer are:

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

#### Application:

Used for injection molding of high gloss parts.

#### Examples:

Light covers, fountain pens, appliance housings, appliance lenses and housewares.

#### Processing:

ACRYLITE PLUS ZK5HG 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® ZK5HG polymer
<b>Mechanical Properties</b>				Typical Value
Tensile Strength		psi [MPa]	D 638	6200 [42.7]
Tensile Modulus		x10 <sup>6</sup> psi [GPa]	D 638	0.23 [1.6]
Tensile Elongation @ Yield		%	D 638	6
Tensile Elongation @ Break		%	D 638	30
Flexural Strength		psi [MPa]	D 790	9400 [64.8]
Flexural Modulus		x10 <sup>6</sup> psi [GPa]	D 790	0.23 [1.57]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	0.7 [36.7]
Notched Izod	⅛" bar @23°C	ft-lb/in [J/m]	D 256	0.66 [34.6]
Rockwell Hardness		M Scale	D 785	38
<b>Thermal Properties</b>				
Vicat Softening Point		°F [°C]	D 1525	192 [89]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	183 [95]
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
<b>Rheological Properties</b>				
Melt Flow Rate	230°C & 3.8 kg	g/10min	D 1238	1.8
<b>Optical Properties</b>				d = 3.2 mm
Light Transmission		%	D 1003	91
Haze		%	D 1003	1
Yellowness Index			D 1925	0.2
<b>Other Properties</b>				
Specific Gravity			D 792	1.15
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	0.66
<b>Recommended processing conditions</b>				
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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