

Product Information

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ACRYLITE® 8N df 23 light diffusing acrylic polymer

Product Profile:

ACRYLITE® 8N df 23 light diffusion acrylic polymer is an amorphous thermoplastic molding and extrusion compound based on polymethyl methacrylate (PMMA) and diffusion polymers.

Typical properties of ACRYLITE® acrylic polymers are:

- excellent weather resistance
- high mechanical strength
- high surface hardness and mar resistance
- good melt flow rate

The special properties of ACRYLITE 8N df 23 polymer are:

- excellent light diffusion combined with excellent light transmission
- highest heat resistance
- high melt strength
- low levels of lubricant

Application:

Used for injection molding and extrusion of lighting luminaries, instrument displays and extruded profiles.

Examples:

Commercial and residential lighting covers, electronics and point-of-purchase displays.

Processing:

ACRYLITE 8N df 23 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® 8N df 23 polymer
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	11500 [79.3]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.55 [3.8]
Tensile Elongation @ Yield		%	D 638	4
Tensile Elongation @ Break		%	D 638	4
Flexural Strength		psi [MPa]	D 790	19000 [131]
Flexural Modulus		x10 ⁶ psi [GPa]	D 790	0.5 [3.5]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	0.3 [16]
Rockwell Hardness		M Scale	D 785	95
Thermal Properties				
Vicat Softening Point		°F [°C]	D 1525	246 [119]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	221 [105]
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	2.9
Optical Properties				d = 3.2 mm
Light Transmission		%	D 1003	86
Haze		%	D 1003	96
Yellowness Index			D 1925	<6.5
Other Properties				
Specific Gravity			D 792	1.19
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	0.66
Recommended processing conditions				
Predrying Temperature		°F [°C]		175 [80]
Predrying Time		hour		3 – 4
Melt Temperature		°F [°C]		464 – 482 [240 –250]
Cylinder Temperature		°F [°C]		464 – 482 [240 –250]
Mold Temperature		°F [°C]		100 – 175 [38 – 80]

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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