

ACRYLITE® 8N polymer

Product Profile:

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

Typical properties of ACRYLITE® acrylic polymers are:

- excellent weather resistance
- high light transmission
- high mechanical strength
- high surface hardness and mar resistance
- good melt flow rate
- versatile colorability due to crystal clarity

The special properties of ACRYLITE® 8N polymer are:

- highest heat resistance
- high melt strength
- UV light absorption options
- low levels of lubricant
- AMECA listed

Application:

Used for injection molding commercial and residential lighting lenses, automotive lenses and parts, optical devices and extruded profiles.

Examples:

Automotive rear light lenses, reflex lenses, fog light lenses, telematic sensors, displays, light covers and HID lamp lenses.

Processing:

ACRYLITE® 8N 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 polymer
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	11300 [77.9]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.47 [3.2]
Tensile Elongation @ Yield		%	D 638	4 – 6
Tensile Elongation @ Break		%	D 638	4 – 6
Flexural Strength		psi [MPa]	D 790	16200 [111.7]
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	0.36 [19]
Rockwell Hardness		M Scale	D 785	95
Thermal Properties				
Vicat Softening Point	264 psi	°F [°C]	D 1525	226[108]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	212 [100]
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	3.3
Optical Properties				d = 3.2 mm
Light Transmission		%	D 1003	92
Haze		%	D 1003	<1
Yellowness Index			D 1925	<1
Other Properties				
Specific Gravity			D 792	1.19
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

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.acrylite-polymers.com
 Technical Support: visit the TechKnowledge Center at cyro.custhelp.com

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