ACRYLITE® 8N

Polymethyl Methacrylate Acrylic

Evonik Cyro LLC

Message:

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.

General Information	
UL YellowCard	E54671-244583
Additive	Lubricant
Features	Amorphous
	Good Colorability
	Good Flow
	Good Melt Strength
	Good Weather Resistance
	High Clarity
	High Hardness
	High Heat Resistance
	High Strength
	Lubricated
	Scratch Resistant
	UV Absorbing
Uses	Automotive Exterior Parts
	Lenses
	Lighting Applications
	Optical Applications
	Profiles
Agency Ratings	EC 1907/2006 (REACH)
Appearance	Clear/Transparent

Forms	Pellets
Processing Method	Extrusion
	Injection Molding
	Profile Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	ASTM D792
Apparent Density	0.66	g/cm³	ASTM D1895
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	3.3	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Water Absorption (Equilibrium)	< 0.30	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	95		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3240	MPa	ASTM D638
Tensile Strength	77.9	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	4.0 to 6.0	%	
Break	4.0 to 6.0	%	
Flexural Modulus	3450	MPa	ASTM D790
Flexural Strength	112	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 6.35 mm)	19	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed, 6.35 mm)	100	°C	ASTM D648
		°C	
Vicat Softening Temperature	108		ASTM D1525
CLTE - Flow (0 to 156°C)	7.2E-5	cm/cm/°C	ASTM D696
Optical	Nominal Value	Unit	Test Method
Transmittance (3200 μm)	92.0	%	ASTM D1003
Haze (3200 µm)	< 1.0	%	ASTM D1003
Yellowness Index (3.20 mm)	< 1.0	YI	ASTM D1925

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