ACRYLITE® H12

Polymethyl Methacrylate Acrylic

Evonik Cyro LLC

Message:

ACRYLITE® H12 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 H12 polymer are:
medium heat resistance
medium melt flow rate
UV light transmitting
Low levels of lubricant
Application:
Used for injection molding and extrusion of optical and technical parts.

General Information	
UL YellowCard	E54671-244567
Additive	Lubricant
Features	Amorphous
	Good Colorability
	Good Flow
	Good Weather Resistance
	High Clarity
	High Hardness
	High Strength
	Lubricated
	Medium Heat Resistance
	Scratch Resistant
Uses	Decorative Displays
	Electrical/Electronic Applications
	Engineering Parts
	Lenses
	Lighting Applications
	Medical/Healthcare Applications
	Optical Applications
	Piping
	Profiles
	Rods
	Tubing

Agency Ratings	EC 1907/2006 (REACH)
Appearance	Clear/Transparent
Forms	Pellets
Processing Method	Extrusion Injection Molding Pipe Extrusion 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)	7.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.60	%	ASTM D955
Water Absorption (Equilibrium)	< 0.30	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	94		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3240	MPa	ASTM D638
Tensile Strength	65.5	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	4.0 to 6.0	%	
Break	4.0 to 6.0	%	
Flexural Modulus	3380	MPa	ASTM D790
Flexural Strength	117	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)	93.9	°C	ASTM D648
Vicat Softening Temperature	105	°C	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

Recommended distributors for this material

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