

# ACRYLITE® L40

Polymethyl Methacrylate Acrylic

Evonik Cyro LLC

## Message:

ACRYLITE® L40 acrylic polymer is an amorphous thermoplastic molding 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® L40 polymer are:

- low heat resistance
- highest melt flow rate
- UV light transmitting
- medium levels of lubricant

Application:

Used for injection molding thin-wall medical devices requiring UV spectroscopy for fluid evaluation.

General Information			
Additive	Lubricant		
Features	Amorphous		
	Good Colorability		
	Good Flow		
	Good Weather Resistance		
	High Clarity		
	High Hardness		
	High Strength		
	Lubricated		
Scratch Resistant			
Uses	Medical/Healthcare Applications		
	Thin-walled Parts		
Agency Ratings	EC 1907/2006 (REACH)		
Appearance	Clear/Transparent		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm <sup>3</sup>	ASTM D792
Apparent Density	0.66	g/cm <sup>3</sup>	ASTM D1895
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	26	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.30 to 0.60	%	ASTM D955
Water Absorption (Equilibrium)	< 0.30	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	84		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3240	MPa	ASTM D638
Tensile Strength	60.7	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	2.0 to 4.0	%	
Break	2.0 to 4.0	%	
Flexural Modulus	3030	MPa	ASTM D790
Flexural Strength	97.9	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)	74.0	°C	ASTM D648
Vicat Softening Temperature	82.0	°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

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