

ACRYLITE SuPure™ H12

Polymethyl Methacrylate Acrylic

Evonik CYRO LLC

Product Description

ACRYLITE® SuPure™ acrylic polymer is an exceptional pure polymer designed for applications that demand maximum cleanliness. Our proprietary purification process starts at CYRO's manufacturing plant and extends all the way to your facility's processing point - for a total purity solution. It ensures a polymer free of dust, fines and contaminants that consistently delivers exceptional clarity and eliminates costly defects.

ACRYLITE SuPure polymer offers better clarity and quality of light transmission than glass. Its molding and thermoforming capabilities give you more fabrication options. At half the weight of glass, its outstanding impact resistance makes it a safer alternative.

Specially engineered for a variety of applications such as optical lenses, bathware bars and rods, lighting, and retail point-of-purchase displays, ACRYLITE SuPure polymer is available in five optical grades for a wide range of molding and extrusion capabilities.

The ACRYLITE SuPure polymer solution includes a choice of two packaging systems that offer total end-to-end purity. These delivery systems guarantee a consistently superior product which will improve overall manufacturing costs, processes, and performance - from beginning to end.

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Flow • Good Impact Resistance	• High Clarity • High Heat Resistance	• High Purity
Uses	• Automotive Applications • Bathroom Accessories	• Decorative Displays • Lenses	• Lighting Fixtures • Optical Applications
Agency Ratings	• EC 1907/2006 (REACH)		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Physical	Nominal Value Unit	Test Method
Specific Gravity	1.19 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	7.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.30 to 0.60 %	ASTM D955
Water Absorption (Saturation)	0.30 %	ASTM D570

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	3240 MPa	ASTM D638
Tensile Strength (Yield)	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)	16 J/m	ASTM D256

Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (M-Scale)	94	ASTM D785

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		ASTM D648
1.8 MPa, Annealed	93.9 °C	
Vicat Softening Temperature	105 °C	ASTM D1525 ²
CLTE - Flow (0 to 100°C)	0.000072 cm/cm/°C	ASTM D696

Optical	Nominal Value Unit	Test Method
Refractive Index	1.490	ASTM D1003
Transmittance	92.0 %	ASTM D1003
Haze	< 1.0 %	ASTM D1003
Yellowness Index	< 1.0 YI	ASTM D1003

Injection	Nominal Value Unit
Drying Temperature	76.7 °C
Drying Time	3.0 to 4.0 hr