

Isocor™ 6105

Polyamide 610

Shakespeare Monofilaments and Specialty Polymers

Message:

Isocor™ 6105 is a medium viscosity PA-610. This resin is specifically suited for applications requiring low moisture absorption and greater dimensional stability. Isocor™ 6105 is also used in applications requiring improved abrasion resistance. This resin can be processed using conventional techniques.

Typical applications for 6105 include:

cable jacketing

film extrusions

monofilaments / bristles

automotive tubing

General Information				
Features	Good dimensional stability			
	Low hygroscopicity			
	Good wear resistance			
	Medium viscosity			
Uses	Films			
	monofilament			
	Cable sheath			
	Pipe fittings			
	Application in Automobile Field			
Forms	Particle			
Processing Method	Film extrusion			
	Injection molding			
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.07	--	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	1.1	--	%	ASTM D955
Water Absorption (24 hr)	--	1.4	%	ASTM D570
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Strength	60.0	51.7	MPa	ASTM D638
Tensile Elongation (Break)	100	300	%	ASTM D638
Flexural Modulus	2000	1300	MPa	ASTM D790
Impact	Dry	Conditioned	Unit	Test Method
Notched Izod Impact	48	200	J/m	ASTM D256
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ASTM D648
0.45 MPa, not annealed	175	160	°C	ASTM D648

1.8 MPa, not annealed	66.1	60.0	°C	ASTM D648
Melting Temperature	215	--	°C	DSC
Injection	Dry	Unit		
Dew Point	< -17.8		°C	
Suggested Max Moisture	0.20		%	
Hopper Temperature	79.4		°C	
Rear Temperature	221 - 243		°C	
Middle Temperature	227 - 260		°C	
Front Temperature	238 - 271		°C	
Nozzle Temperature	238 - 271		°C	
Processing (Melt) Temp	238 - 271		°C	
Mold Temperature	10.0 - 93.3		°C	
Injection Pressure	3.45 - 13.8		MPa	
Injection Rate	Fast			
Back Pressure	0.345		MPa	
Extrusion	Dry	Unit		
Suggested Max Moisture	0.10		%	
Hopper Temperature	79.4		°C	
Cylinder Zone 1 Temp.	254		°C	
Cylinder Zone 2 Temp.	266		°C	
Cylinder Zone 3 Temp.	271		°C	
Cylinder Zone 4 Temp.	271		°C	
Die Temperature	271		°C	
Extrusion instructions				

Flange: 500°F (260°C) Air Dew Point (max): 0°F (-18°C) Neck: 500°F (260°C) Head: 480°F (250°C) Pump: 480°F (250°C) L/D Ratio: 24 to 30:1 Compression Ratio: 3.5:1 Polymer @ Die: 430°F (220°C) Screw Pressure: 2000 psi

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