

Isocor™ 6104

Polyamide 610

Shakespeare Monofilaments and Specialty Polymers

Message:

Isocor™ 6104 is a low viscosity PA-610. This resin is specifically suited for applications requiring low moisture absorption and greater dimensional stability. Isocor™ 6104 is also used in applications requiring good electrical insulation properties. This resin can be processed using conventional techniques.

Typical applications for 6104 include:

cable jacketing

monofilaments / bristles

bonded magnet binder

electrical connectors

General Information				
Features		Good dimensional stability		
		Low hygroscopicity		
		Low viscosity		
		Insulation		
Uses		monofilament		
		Cable sheath		
		Electronic insulation		
		Connector		
		Bonding		
Forms		Particle		
Processing Method		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
Taber Abrasion Resistance (1000 Cycles)	6.00	--	mg	ASTM D1044
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 30:1Compression Ratio: 3.5:1Polymer @ Die: 430°F (220°C)Screw Pressure: 2000 psi				

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