

Futerro® Injection

Polylactic Acid

Futerro

Message:

Futerro® PLA injection grade is a thermoplastic resin derived from annually renewable resources and is specifically designed for injection molding applications where the requirements are clarity with heat deflection temperatures lower than 55°C.

Futerro® PLA injection grade is easily processed on conventional injection equipment. The material is stable in the molten state, provided that the drying procedures are followed.

General Information			
Features	Updatable resources		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density (25°C)	1.24	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	10 - 30	g/10 min	ISO 1133
210°C/2.16 kg	30 - 60	g/10 min	ISO 1133
Free Lactide Content		%	
L-poly-Lactide Content	> 99	%	
Moisture Content		ppm	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3500	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield	60.0	MPa	ISO 527-2
Fracture	55.0	MPa	ISO 527-2
Tensile Strain (Break)	6.0	%	ISO 527-2
Flexural Stress	90.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	3.5	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	52.0 - 60.0	°C	ISO 11357-2
Melting Temperature	145 - 175	°C	ISO 11357-3
Optical	Nominal Value	Unit	Test Method
Transmittance (2000 µm)	> 90.0	%	ISO 14782
Haze (2000 µm)	< 5.0	%	ISO 14782
Fill Analysis	Nominal Value	Unit	
Melt Density (230°C)	1.08 - 1.12	g/cm ³	
Injection	Nominal Value	Unit	
Drying Temperature	90.0	°C	

Drying Time	2.0	hr
Suggested Max Moisture	0.025	%
Rear Temperature	150 - 165	°C
Middle Temperature	195	°C
Front Temperature	210	°C
Nozzle Temperature	210	°C
Processing (Melt) Temp	200	°C
Mold Temperature	25.0	°C
Back Pressure	0.300 - 0.700	MPa
Screw Speed	100 - 175	rpm

Injection instructions

Feed Throat Temperature: 20°C Feed Temperature (Crystalline Pellets): 165°C Feed Temperature (Amorphous): 150°C

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