

Ingeo™ 7001D

Polylactic Acid

NatureWorks® LLC

Message:

Ingeo biopolymer 7001D, a NatureWorks LLC product, is a thermoplastic resin derived from annually renewable resources and is specifically designed for use in injection stretch blow molded (ISBM) bottle applications. Ingeo biopolymer 7001D can be run using conventional ISBM equipment, but processes at lower temperatures than PET and can attain good resolution of mold detail on conventional tooling.

Applications

Injection stretch blow molded (ISBM) bottles for single- or two- stage operations. Potential applications for Ingeo 7001D include:

Fresh Dairy

Edible Oils

Fresh Water

Health/Beauty/Amenity

General Information			
Features	Comstable		
	Updatable resources		
	Biodegradable		
	Compliance of Food Exposure		
Uses	Bottle		
Agency Ratings	ASTM D 6400		
	EN 13432		
	EU 94/62/EC		
	FDA Food Exposure, Not Rated		
	Europe 10/1/2011 12:00:00 AM		
Forms	Particle		
Processing Method	Injection Stretch Blow Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (210°C/2.16 kg)	6.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.30 - 0.50	%	
Films	Nominal Value	Unit	Test Method
Carbon Dioxide Transmission Rate	2850	cm ³ /m ² /24 hr	Internal method
Oxygen Transmission Rate	680	cm ³ /m ² /24 hr	ASTM D1434
Water Vapor Transmission Rate	380	g/m ² /24 hr	ASTM F1249
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	55.0 - 60.0	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	145 - 160	°C	ASTM D3418
Injection	Nominal Value	Unit	
Drying Temperature	65.0 - 85.0	°C	

Drying Time	4.0 - 6.0	hr
Suggested Max Moisture	< 0.010	%
Rear Temperature	179	°C
Middle Temperature	210	°C
Front Temperature	210 - 221	°C
Nozzle Temperature	210 - 221	°C
Processing (Melt) Temp	199 - 221	°C
Mold Temperature	21.1 - 37.8	°C
Back Pressure	0.689 - 1.38	MPa
Injection instructions		

General Blow Molding:Preform Temperature: 176 to 212°FStretch Rod Speed: 1.2 to 2 m/sec

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