Ingeo™ 6204D

Polylactic Acid

NatureWorks® LLC

Message:

NatureWorks® PLA polymer 6204D, a NatureWorks LLC product, is a thermoplastic fiber-grade resin derived primarily from annually renewable resources. Available in pellet form, 6204D is designed for extrusion into mechanically drawn staple fibers or continuous filament, using conventional fiber spinning and drawing equipment. 6204D is typically well suited for fiber processes where deeper disperse dying in the final product is desired: partially orientated yarn (POY), fully drawn yarn (FDY), staple fibers, and continuous filament. NatureWorks® PLA 6204 can be converted into a broad range of fiber products.
Potential applications for PLA polymer 6204D include:
Woven and knitted 100% continuous filament apparel
Woven and knitted, intimate staple blend fabrics including blends with cotton, wool, and other fibers
Woven and knitted fabrics and netting for civil engineering applications
Home furnishings

General Information			
Features	Biodegradable Compostable Food Contact Acceptable Renewable Resource Content		
Uses	Fabrics Household Goods Staple Fibers Textile Applications Yarn		
Agency Ratings	EU 10/2011 EU 2002/72/EC FDA Food Contact, Unspecified Rating		
Forms	Pellets		
Processing Method	Fiber (Spinning) Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.24	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (210°C/2.16 kg)	15 to 30	g/10 min	ASTM D1238
Relative Viscosity	3.10		Internal Method
Shrinkage			ASTM D2102
Boiling Water	5.0 to 15	%	
Hot Air : 130°C [1]	5.0 to 15	%	
Modulus of Elasticity	30.0 to 40.0	g/denier	ASTM D2256
Denier - per filament	> 0.500		

Elongation of Fibers	10 to 70	%	ASTM D2256
Tenacity of Fibers	2.50 to 5.00	g/denier	ASTM D2256
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	55.0 to 60.0	°C	ASTM D3417
Peak Crystallization Temperature (DSC)	155 to 170	°C	ASTM D3418
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density (230°C)	1.08	g/cm³	
Extrusion	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	< 5.0E-3	%	
Melt Temperature	220 to 240	°C	
NOTE			
1.	10 min		

Recommended distributors for this material

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