

NEXUS BIO BIO-100

Biodegradable Polymers

Nexus Resin Group, LLC.

Message:

Film Blowing Grade Starch-Based Biodegradable Resin

Nexus BIO-100 is a Hybrid starch resin based on the combination of thermoplastic starch (25%-75%), degradable polyethylene (10-45%) and other self oxidation.

This grade of resin is designed for manufacturing biodegradable plastic films with high mechanical strength, outstanding elongation properties and toughness and easily colored.

Applications include agricultural films, garbage bags (with / without poly drawstring), merchandise bags (T-shirt bags / shopping bag), Promotional bags, Special inside / outside packaging.

General Information			
Features	High strength		
	Updatable resources		
	Good coloring		
	Good toughness		
	Biodegradable		
	Extended tensile rate		
Uses	Packaging		
	Films		
	Bags		
	Agricultural application		
Appearance	Yellow		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm ³	Internal method
Melt Mass-Flow Rate (MFR)	0.80 - 1.5	g/10 min	Internal method
Moisture Content	0.50	%	Internal method
Biology Content	> 62	%	Internal method
Hexane Extraction		%	Internal method
Starch Content	> 35	%	Internal method
Tear Strength - Right Angle	> 40.0	MPa	Internal method
Films	Nominal Value	Unit	Test Method
Tensile Strength			Internal method
MD: Yield	25.6	MPa	Internal method
TD: Yield	33.0	MPa	Internal method
Tensile Elongation			Internal method
MD: Fracture	380	%	Internal method
TD: Fracture	560	%	Internal method

Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	> 65.0	°C	Internal method
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	175	°C	
Cylinder Zone 2 Temp.	180	°C	
Cylinder Zone 3 Temp.	185	°C	
Cylinder Zone 4 Temp.	180	°C	
Extrusion instructions			

Extruder Head (I): 185°C Extruder Head (II): 175°C Rotational Speed: 600 to 70 r/min Blow-up Ratio: 4 to 5 Pulling Speed: 80 to 150 r/min Screw L/D Ratio: 24:1 to 32:1 Precision Temperature Control: $\pm 5^{\circ}\text{C}$ Filler installment: 120 mesh-120 mesh (two levels) from inside to outside

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