

BiologiQ™ GS270

Thermoplastic Starch

BiologiQ

Message:

BiologiQ focuses on creating plastic materials from the starch of renewable resources. Our bioplastic resin pellets are made from sustainable agriculture and are 100% natural and safe.

BiologiQ GS270 is a plasticized thermoplastic starch (TPS) resin we call EcoStarch Resin (ESR). Supplied in pellet form.

Applications:

BiologiQ GS270 is a thermoplastic starch (TPS) polymer suitable for blending with petro-chemical or bioresins where biobased content is desired.

Can be used as a stand-alone polymer for certain low-temp injection molding applications

Highly compostable and biodegradable.

GS270 forms a crystalline structure product that has good strength and low plasticity.

When the GS270 absorbs moisture it exhibits plastic behavior and becomes flexible. When removed from a humid environment the material dries out and becomes crystalline again.

Used for final products requiring plasticity such as plastic dinnerware (plates, cups, and plastic utensils). Packaging structures such as thermoformed trays for various industries. Blended with PE to make thin film products such as shopping bags.

General Information			
Features	Biodegradable		
	Compostable		
	Crystalline		
	Good Strength		
	Renewable Resource Content		
Uses	Bags		
	Blending		
	Disposable Drinkware		
	Film		
	Packaging		
	Structural Parts		
	Support Trays		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.40	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.0	g/10 min	ASTM D1238
Water Content	< 1.0	%	ASTM D6980
Impact Resistance - Dart	3500	g	ASTM D5628
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1500	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	> 30.0	MPa	
Break	> 30.0	MPa	
Tensile Elongation (Break)	< 10	%	ASTM D638

Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	81.0 to 100	°C	ASTM D3418
Peak Melting Temperature	166 to 180	°C	ASTM D3418
Extrusion	Nominal Value	Unit	
Drying Temperature	60.0	°C	
Drying Time	1.0 to 4.0	hr	
Suggested Max Moisture	< 1.0	%	

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