

Biograde B-M

Biodegradable Polymers

Biograde Group of Companies

Message:

A fully biodegradable resin for rigid moulding applications
Greater than 98% biodegradability when tested to ISO14855
Can be used for injection moulding and profile extrusion
BIOGRADE B-M is a fully biodegradable plastic based on a blend of thermoplastic starch (TPS), aliphatic polyesters (AP) and natural plasticizers (glycerol and sorbitol). This grade of resin is compatibilised to offer a high level of mechanical strength, good elongation properties and toughness. The resin is based on corn starch which is a renewable material. The resin does not contain polyolefins.

Applications

Biodegradable injection moulded products such as cutlery, toothbrushes, combs, shavers, golf-tees, plant markers, etc.

Extruded tubes and rods

Biodegradable stakes and pegs

Biodegradable tags

Extruded pipes

Injection moulded caps and closures

Compostable rigid products if wall thickness is kept below 1 mm.

General Information			
Features	Biodegradable		
	Good Toughness		
	High Elongation		
	High Strength		
	Renewable Resource Content		
Uses	Caps		
	Closures		
	Disposable Tableware		
	Personal Care		
	Piping		
	Rods		
	Toothbrush Handles		
	Tubing		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.22	g/cm ³	ASTM D4883
Melt Mass-Flow Rate (MFR) (150°C/0.325 kg)	1.8	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method

Tensile Strength (Break)	19.5	MPa	ASTM D883
Tensile Elongation (Break)	1.9	%	ASTM D883
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	24	J/m	ASTM D256
Unnotched Izod Impact	160	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Peak Melting Temperature	70.0 to 80.0	°C	ASTM D3418
Injection	Nominal Value	Unit	
Suggested Max Moisture	0.20	%	
Middle Temperature	150 to 160	°C	
Front Temperature	130 to 140	°C	
Nozzle Temperature	140 to 160	°C	
Processing (Melt) Temp	160 to 165	°C	
Mold Temperature	10.0 to 15.0	°C	
Extrusion	Nominal Value	Unit	
Suggested Max Moisture	0.20	%	
Melt Temperature	160 to 165	°C	

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