# **BIOPLAST® GS 2189**

#### Thermoplastic

BIOTEC GmbH & Co. KG

#### Message:

Films

BIOPLAST GS 2189 is BIOTEC's trademark for a completely new, plasticizer-free thermoplastic material. BIOPLAST GS 2189 is extremely suitable for sheet film extrusion, blown film extrusion and injection moulding of completely biodegradable products. The complete biodegradability and other functional properties enable the converter to advance in production areas, which could not be reached with traditional thermoplastic materials.

General Information				
Features	Biodegradable			
	Food Contact Acceptable			
	Good Colorability			
	Good Heat Seal			
	High Rigidity			
	Renewable Resource Content			
Uses	Agricultural Applications			
	Film			
	Packaging			
	Sheet			
Agency Ratings	BgVV Recommendation XXV			
	EEC 2002/72/EC			
	EN 13432			
	FDA FCN 558			
Forms	Granules			
Processing Method	Blown Film			
	Film Extrusion			
	Injection Molding			
	Sheet Extrusion			
	Thermoforming			
Dhysical	Naminal Valua	l lait	Took Makhad	
Physical	Nominal Value	Unit	Test Method	
Density	1.20 to 1.40	g/cm³	ISO 1183	
Apparent Density	0.88 to 0.94	g/cm³	ISO 60	
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	15 to 40	g/10 min	ISO 1133	
Particle Size	2.00 to 3.00	mm		
Water Content	< 0.20	%	Internal Method	
E1		11-1		

Unit

Test Method

Nominal Value

Film Thickness - Tested	> 10	μm	ISO 2286-3
Tensile Strength			DIN 53455
MD : 23°C, 10 μm	40.0 to 50.0	MPa	
TD : 23°C, 10 μm	35.0 to 45.0	MPa	
Carbon Dioxide Transmission Rate (400			
μm)	150 to 200	$cm^3/m^2/24 hr$	ASTM D1434
Oxygen Transmission Rate (Wet) (400 µm)	40.0 to 60.0	cm³/m²/24 hr	ASTM F1927
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179
-20°C	75	kJ/m²	
23°C	140	kJ/m²	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	60.0	°C	ISO 306/A120
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.10 to 1.30	g/cm³	ISO 1133

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### Recommended distributors for this material

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