EMNANDI BIOPLASTICS
BEYOND NET ZERO

Technical Data Sheet

BIOMAT RPLA B341A

A thermoplastic resin composed primarily of poly(lactic acid) (PLA) which is both renewable and industrially compostable. It is produced from the fermentation of sugar or corn to produce lactic acid, followed by polymerisation via the intermediate lactide. It has a considerably lower carbon footprint than fossil-fuel based plastics and can be both mechanically and chemically recycled.

This grade has been mechanically recycled from Ingeo™ 4032D which is a a high molecular weight biopolymer grade that processes easily on conventional extrusion equipment. This general purpose extrusion grade that is used naturally or as part of a formulated blend and can be used for 3D printing. It can also be converted into a biaxially oriented film with use temperatures up to 150°C. This film has excellent optics, good machinability and excellent twist and deadfold. These properties make this film an ideal product for laminations and other packaging applications. Additional properties include barrier to flavour, and grease and oil resistance.

Applications	Features
Bi-Axially Oriented Film	Mechanically Recycled
Laminates	Compostable
Packaging	
Profiles	
3D Printing	

Physical Properties				
Density	1,24	g/cm³		
Melt Flow Rate	2 - 5	g/10min		190°C/2.16 kg
Mechanical Properties				
Notched Izod Impact Strength	16	J/m	ASTM D256	
Tensile Elongation	6	%		
Tensile Modulus	3120	MPa		
Tensile Strength at Break	53	MPa	ASTM D882	
Tensile Strength at Yield	60	MPa	ASTM D882	
Film Properties				
Elmendorf Tear Strength	17	g	ASTM D1922	Machine Direction
Elmendorf Tear Strength	14	g	ASTM D1922	Transverse Direction
Gloss	90		ASTM D1003	20°
Haze	2	%	ASTM D1003	
Spencer Impact	2	J		
Tensile Elongation at Break	180	%	ASTM D882	Machine Direction
Tensile Elongation at Break	100	%	ASTM D882	Transverse Direction
Tensile Modulus	3450	MPa	ASTM D882	Machine Direction
Tensile Modulus	3790	MPa	ASTM D882	Transverse Direction
Tensile Strength	103	MPa	ASTM D882	Machine Direction
Tensile Strength at Break	145	MPa	ASTM D882	Transverse Direction
Thermal Properties				

Melt Temperature	155 - 170 °C	ASTM D256
Chemical Properties		
Relative Humidity	500 ppm	
Processing Methods		
Compounding		
Extrusion		
Forms		
Pellets		
Appearance		
Opaque		

Notes

Some properties have been derived from the original grade prior to mechanical recycling for illustration and may differ from the recycled grade.

Storage Recommendations

Keep dry at ambient temperature. Store indoors avoiding a humid environment, heat and direct sunlight. Use material within 6 months after delivery date, in order to prevent possible material quality deterioration.