EMNANDI BIOPLASTICS
BEYOND NET ZERO

Technical Data Sheet

BIOMAT RPLA B441A

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™ 2500HP which has a high viscosity. It is designed to crystallise during processing, leading to higher heat deflection temperatures in opaque applications. It suitable for processing by injection mouolding, extrusion, 3D printing and fibre-spinning.

Applications	Features
Fabrics/Textiles	Compostable
3D Printing	Mechanically Recycled
Stationery Supplies	
General Purpose	
Decorative Parts	

Sustainability	
Bio-Based Content	100%
Compostability	Industrially Compostable

Physical Properties				
Density	1.24	g/cm³		
Melt Mass Flow Rate	5 - 8	g/10min		(190°C/2.16 kg)
Relative Viscosity	4	g/dL		

Mechanical Properties				
Flexural Modulus	3640	MPa		
Flexural Strength	113	MPa		
Notched Izod Impact Strength [J/m]	19	J/m		
Notched Izod Impact Strength [J/m]	40	J/m	Estimated**	
Shrinkage	0.3 - 0.4	%		Linear
Tensile Elongation	3.6	%		
Tensile Strength	64	MPa		At Yield

Thermal Properties		
Decomposition Temperature	250	°C
Glass Transition Temperature	55 - 60	°C
Heat Distortion Temperture	54	°C
Melt Temperature	150 - 180	°C

Processing Methods

3D Printing

Extrusion

Fibre (Spinning) Extrusion

Injection Moulding

Forms

Pellets

Appearance

White

Notes

Estimated Properties

Properties identified as 'Estimated**' have been estimated from the generic equivalent. These are provided for comparative purposes and are not reflective of the actual grade as the relevant data is not available.

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.

Information in this document is based on our current knowledge and experience and can vary by batch. It does not relieve customers of the responsibility to carry out their own tests and experiments nor do they imply any legally binding assurance. Customers are responsible to determine their freedom to operate to ensure that their products do not infringe any intellectual properties. Emnandi Bioplastics Ltd assumes no obligation or liability for the information in this document.