

## Embio® EB10MV

Medium Viscosity neat PLA resin with excellent heat-resistant tailored for injection molding, spunbond, and fiber spinning processes.

### DESCRIPTION

Embio grades are plant-based polymers that offer a significant reduction in carbon footprint and sustainable circular options through recycling or composting. Embio EB10MV is a neat Polylactic Acid (PLA) resin with medium flow and rapid crystallization rate, allowing for higher heat resistance and lower shrinkage in its final products. It is designed for food contact applications and meets industrial compostability standards, making it ideal for applications such as:

- Injection molded tableware.
- Spunbond fabrics.
- Staple fibers for wetlaid tea bags.
- Key building block in formulated blends.
- Textured and flat yarns for textiles.

### TYPICAL PROPERTIES

Physical properties	Test method	Typical value
Melt Flow Rate, MFR, g/10 min (190°C, 2.16kg)	ISO 1133	5-12
Melt Flow Rate, MFR, g/10 min (210°C, 2.16kg)	ISO 1133	20-26
Density, g/cm <sup>3</sup>	ISO 1183	1.24
Melting temperature, °C	ISO 11357	170-180
Glass transition temperature, °C	ISO 11357	58-60
Appearance	Visual	Clear (Opaque*)
Mechanical properties*	Test method	Typical value
Tensile yield strength, MPa	ISO 527	45-50
Elongation at break, %	ISO 527	2-5
Notched izod impact, J/m	ISO 179	20-35
Heat Deflection Temperature, HDT B, °C	ISO 75	105-145
Shrinkage, %	ISO 294	1.7-1.8
Typical fiber properties**	Test method	Typical value
Tenacity, g/d	ISO 2062	3.0-5.5
Elongation, %	ISO 2062	10-60

\*When fully crystallized using heated mold tooling

\*\*0.5 denier per filament

### GENERAL INFORMATION

- Embio EB10MV resin can be used as a neat resin or as part of a formulated blend. It can be processed using standard spunbond and fiber spinning equipment for polyester with minimal processing adjustments.
- Embio EB10MV should be stored indoors in its original, unopened packaging to prevent moisture absorption and exposure to excessive heat.
- For injection molding, moisture content should be below 250 ppm and below 50 ppm for spunbond processing, to prevent viscosity degradation. A desiccant dryer capable of delivering air with a dew point below -40°C is recommended. Suggested drying condition are available in the processing guideline document.
- Avoid prolonged idle time with PLA in a filled system, as this may cause thermal degradation and leads to material degradation and blockages.
- We recommend performing trials to validate the processing of the material and the performance of the final product. Emirates Biotech Technical Solutions team is available to help optimize the processing and to support application development.

### FOOD CONTACT STATUS

This Embio grade is designed to comply with food contact regulations. For more information, please contact our Emirates Biotech Products team.

### COMPOSTABILITY

This Embio grade is designed to comply with the established industrial composting standards EN13432 and ASTM D6400. For further information, please contact our Emirates Biotech Products team.

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