

Ecomann® Bioresin EM20010

Polyhydroxyalkanoate

Shenzhen Ecomann Biotechnology Co., Ltd.

Message:

EM20010 is semi-crystalline biodegradable, aliphatic bio-polyester designed for use in injection molding applications. EM20010 is PHA base compound with PLA, minerals and some additives.

EM20010 is certificated to meet EN13432 & ASTM D6400 standards for biodegradable plastics.

Typical applications: Personal care and cosmetic items, trays, disposable and single use items, caps and many other injection molding products

General Information			
Filler / Reinforcement	Mineral		
Additive	Unspecified Additive		
Features	Aliphatic		
	Biodegradable		
	Compostable		
	Good Colorability		
	Good Processability		
	High Gloss		
	High Molecular Weight		
	High Stiffness		
	Hydrolysis Resistant		
	Medium Heat Resistance		
	Recyclable Material		
	Semi Crystalline		
Uses	Caps		
	Cosmetics		
	Personal Care		
Agency Ratings	ASTM D 6400		
	EN 13432		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.33	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (170°C/2.16 kg)	8.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	1.2	%	ASTM D955
Water Absorption (Equilibrium)	< 0.40	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method

Tensile Strength	30.0	MPa	ASTM D638
Tensile Elongation (Break)	5.0	%	ASTM D638
Flexural Modulus	1650	MPa	ASTM D790
Flexural Strength	45.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (Area)	4.00	kJ/m ²	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	105	°C	ASTM D1525 ¹
Melting Temperature	140 to 160	°C	DSC
Optical	Nominal Value	Unit	Test Method
Yellowness Index	45	YI	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	3.0	hr	
Rear Temperature	135 to 145	°C	
Middle Temperature	140 to 165	°C	
Front Temperature	140 to 175	°C	
Nozzle Temperature	140 to 165	°C	
NOTE			

1. Rate B (120°C/h), Loading 1 (10 N)

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