

Ecomann® PHA EM30000

Polyhydroxyalkanoate

Shenzhen Ecomann Biotechnology Co., Ltd.

Message:

EM30000 is semi-crystalline biodegradable, aliphatic bio-polyester designed for use in blown bottle applications.
EM30000 is certificated to meet EU direct food contact, EN13432 and OK Home compost standards for biodegradable plastics.
Typical applications: Shampoo bottles, cosmetics bottles

General Information			
Features	Aliphatic		
	Biodegradable		
	Compostable		
	Excellent Printability		
	Food Contact Acceptable		
	Good Processability		
	High Gloss		
	High Impact Resistance		
	High Stiffness		
	High Strength		
	Hydrolysis Resistant		
	Low Moisture Vapor Transmission		
	Semi Crystalline		
Uses	Bottles		
Agency Ratings	ASTM D 6400		
	EN 13432		
	EU Food Contact, Unspecified Rating		
Forms	Pellets		
Processing Method	Blow Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (170°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Water Absorption (Equilibrium)	< 0.40	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	20.0	MPa	ASTM D638
Tensile Elongation (Break)	100	%	ASTM D638
Flexural Modulus	900	MPa	ASTM D790
Films	Nominal Value	Unit	Test Method

Oxygen Transmission Rate (40°C, 90% RH, 130 µm)	130	cm ³ /m ² /24 hr	
Water Vapor Transmission Rate (25°C, 90% RH, 130 µm)	16	g/m ² /24 hr	
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (Area)	5.00	kJ/m ²	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	85.0	°C	ASTM D1525 ¹
Melting Temperature	140 to 160	°C	DSC
Optical	Nominal Value	Unit	Test Method
Yellowness Index	50	YI	Internal Method
Additional Information	Nominal Value	Unit	
Blow Molding Barrel Temperature			
Compression Section	135 to 145	°C	
Feed Temperature	125 to 140	°C	
Melting Section	140 to 150	°C	
Blow Molding Die Temperature	140 to 150	°C	
Blow Molding Melt Temperature	140 to 160	°C	
Blow Molding Mold Temperature	23	°C	
Blow Molding Screw Speed	20 to 40	rpm	
Extruder Screw L/D Ratio	24.0:1.0 to 30.0:1.0		
Extruder Screw Compression Ratio	1.5:1.0 to 3.0:1.0		
Extrusion	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	3.0	hr	
NOTE			

1. Rate B (120°C/h), Loading 1 (10 N)

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