ecovio® IA1652

Technical DataSheet | Supplied by BASF

ecovio® IA1652 by BASF is a mineral filled, biodegradable heat stable and partly bio-based compound for injection molding. It is mainly based on PLA. This grade possesses a semi-crystalline structure with DSC melting points. ecovio® IA1652 exhibits high strength & stiffness and high but controllable water vapor transmission rate (WVTR). It demonstrates good processability. This grade is a printable, sealable and easy to color compound. This compound shows increased flowability. It is designed for fill filigree thin-walled molds.

Product Type	PLA (Polylactide) > PLA Alloy
Physical Form	Pellets
Product Status	COMMERCIAL
Applications/ Recommended for	Packaging Injection molding - thermoplastics
Food contact approval	Yes
Bio Based	Yes
Labels/Agency Rating	DIN Certco EN 13432 (EU) Vinçotte EN 13432 (EU) BPI ASTM D6400 (USA) DIN EN ISO 9001: 2000 EU Food Stuff Legislation US Food Regulation
Key Features	Biodegradable Colorability, Good Crystalline, Semi Filled, Mineral Flow, Good Heat stabilized Processability, Good Stiffness, High Strength, High

ecovio® IA1652 Properties

Physical	Value & Unit	Test Condition	Test Method
Processing Shrinkage	0.4 %	Parallel	ISO 2577, ISO 294-4

Processing Shrinkage	0.6 %	Test Box, 1 mm	
Processing Shrinkage	0.5 %	Vertical	ISO 2577, ISO 294-4
Density	1380 kg/m^3		ISO 1183
Density, Bulk	0.9 g/cm^3		
Melt Volume Flow Rate (MVR)	17 cm^3/10 min	At 190°C, 2.16 kg	ISO 1133

Thermal	Value & Unit	Test Condition	Test Method
Deflection Temperature at 0.46 MPa (66 psi)	93 °C		ISO 75-1,-2B

Mechanical	Value & Unit	Test Condition	Test Method
E-Modulus	2100 MPa	At 50 mm/min	ISO 527-2
Tensile Strain	8 %	At Break, 50 mm/min	ISO 527-2

ecovio® IA1652 Processing Guidelines

Injection	Value & Unit	Test Condition	Test Method
Temperature Flange	40 °C		
Tool Temperature	25 °C		
Tool Temperature, Range	10 - 40 °C		

Barrel Temperature 1	180 °C
Barrel Temperature 2	185 °C
Barrel Temperature 3	190 °C
Barrel Temperature 4	195 °C
Melt Temperature, Range	180 - 225 °C
Moisture	300 - 600 ppm
Moisture Uptake	< 800 ppm
Drying Time	6 h
Residence Time	< 2 min

Injection Molding	Value & Unit	Test Condition	Test Method
Melt Temperature	195 °C		
Drying Temperature	70 °C		

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