

ArcBioxTM ED4

Technical DataSheet | Supplied by ABMcomposite

ArcBioxTM ED4 by ABMcomposite is an unreinforced, biodegradable, blend of PC (Polycarbonate) and PLA (Polylactic acid) polymer. It contains 25% bio-based content. It is an alternative for unreinforced PC/ABS. It can be processed by injection-molding. It offers medium flow, very good impact properties, good flowability, good flatness and good dimensional stability. ArcBioxTM ED4 is recommended for automotive, consumer electronics and furniture industry.

Product Type	PC (Polycarbonate) > PC + PLA
Product Status	COMMERCIAL
Applications/ Recommended for	Furnitures Electronics / Computers Automotive Injection molding - thermoplastics
Biodegradable	Yes
Bio Based	Yes
Bio Based Content (%)	25
Key Features	Biodegradable Dimensional stability, Good Flow, High Unfilled

ArcBioxTM ED4 Properties

Physical	Value & Unit	Test Condition	Test Method
Density	1.2 g/cm ³		ISO 1183 A
Melt Mass-Flow Rate (MFR or MFI = Melt Flow Index or MI = Melt Index)	28.5 g/10min		ISO 1133-1
Mechanical	Value & Unit	Test Condition	Test Method

Tensile Strength at Break	52 MPa		ISO 527
Flexural Strength	89 MPa		ISO 178
Flexural Modulus	2460 GPa		ISO 178
Impact Strength, Notched Charpy	80 kJ/m ²	+23°C	ISO 179/1eA
Impact Strength, Notched Charpy	18 kJ/m ²	-30°C	ISO 179/1eA

Thermal	Value & Unit	Test Condition	Test Method
Heat Deflection Temperature (HDT)	71 °C	1.8 MPa	ISO 75
Heat Deflection Temperature (HDT)	100 °C	0.45 Mpa	ISO 75
Vicat Softening Temperature	101 °C	B 50	ISO 306

ArcBiox™ ED4 Processing Guidelines

Injection Molding	Value & Unit	Test Condition	Test Method
Melt Temperature	215 - 230 °C		
Nozzle Temperature	220 - 230 °C		
Feed Temperature	200 - 210 °C		
Compression Section	200 - 210 °C		

Metering Section 210 - 220 °C

Screw Speed low - medium

Back Pressure 3 - 5 bars

Holding Pressure 60 %

Mold Temperature 40 - 80 °C

Feed Throat Temperature 50 - 60 °C

Drying Temperature,
Dehumidifying Dryer 80 °C

Drying Time,
Dehumidifying Dryer 2 - 4 hrs

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