ArcBiox™ CA4

Technical DataSheet | Supplied by ABMcomposite

ArcBiox™ CA4 by ABMcomposite is an unreinforced, biodegradable, blend of PC (Polycarbonate) and PLA (Polylactic acid) polymer. It contains 25% bio-based content. It offers very good impact properties, good flowability, good flatness and good dimensional stability. It is an alternative for unreinforced PC/ABS. ArcBiox™ CA4 can be processed by injection-molding. It 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

ArcBiox™ CA4 Properties

Physical	Value & Unit	Test Condition	Test Method
Density	1.2 g/cm³		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

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	Value & Unit	Test Condition	Test Method
Tensile Strength at Break	57 MPa		ISO 527
Flexural Strength	95 MPa		ISO 178
Flexural Modulus	2650 GPa		ISO 178
Impact Strength, Notched Charpy	84 kJ/m^2	+23°C	ISO 179/1eA
Impact Strength, Notched Charpy	37 kJ/m^2	-30°C	ISO 179/1eA

Thermal	Value & Unit	Test Condition	Test Method
Heat Deflection Temperature (HDT)	96 °C	1.8 MPa	ISO 75
Heat Deflection Temperature (HDT)	124 °C	0.45 MPa	ISO 75
Vicat Softening Temperature	138 °C	B 50	ISO 306

ArcBiox™ CA4 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
Back Pressure	3 - 5 bars
Holding Pressure	60 %
Mold Temperature	40 - 80 °C
Feed Throat Temperature	50 - 60 °C
Screw Speed	low - medium
Drying Temperature, Dehumidifying Dryer	80 °C
Drying Time, Dehumidifying Dryer	2 - 4 hrs

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