

## ArcBiox™ MFA-series

The ABMcomposite technology offers bio-based and biodegradable high-performance ArcBiox™ composites and resins, which can compete with many oil-based plastics, such as PE, PP, PS and glass-reinforced PA, PP, PC and PBT.



### Key features

- Mineral filled injection moulding grades with a **bio-content of 75%**
- Suitable for food contact applications
- Temperature resistance 83-96 °C (HDTb)
- Compostable (EN-13432/Industrial compost)
- Fast processing cycles (20-30 seconds) in a cold mould (30-40 °C)
- Alternative for ABS, PP, PS

### Applications

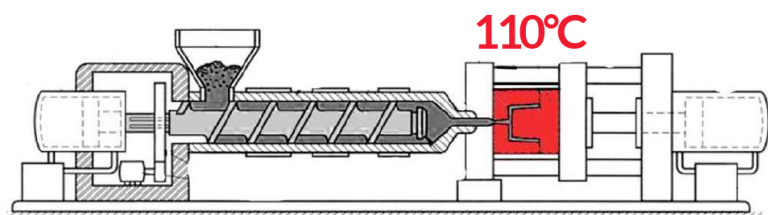
Cosmetics, kitchenware and food packaging, technical semi-durable products

### Injection moulding

PLA

Temp:  110°C

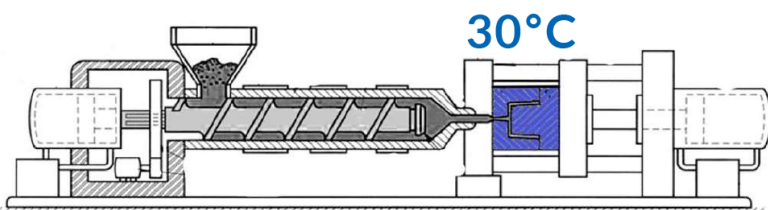
Cycle time: 



MFA & BSGF-series

Temp:  30°C

Cycle time: 



Property, Test Condition	Standard	Unit	ArcBioX™ MFA-series Mineral reinforced ArcBioX™-grades		
			MFA20-B2000	MFA30-B2000	MFA10-C2000
<b>Mechanical Properties</b>					
Flexural Strength, 23 °C	ISO 178	MPa	79	83	53
Flexural Modulus, 23 °C	ISO 178	MPa	3980	5700	1250
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m <sup>2</sup>	5	5	6
Izod Unnotched, 23 °C	ISO 180/U	kJ/m <sup>2</sup>	36	27	74
Charpy Notched Impact Strength, 23 °C / -30 °C	ISO 179/1eA	kJ/m <sup>2</sup>	5 / 3	4 / 3	6 / 4
Charpy Unnotched, 23 °C / -30 °C	ISO 179/1eU	kJ/m <sup>2</sup>	44 / 35	35 / 33	105 / 80
Tensile Stress at Yield, 23 °C	ISO 527	MPa	45	47	41
Tensile Strain at Yield, 23 °C	ISO 527	%	3	2	14
Tensile Stress at Break, 23 °C	ISO 527	MPa	28	42	40
Tensile Strain at Break, 23 °C	ISO 527	%	10	3	16
Tensile Modulus	ISO 527	MPa	4500	6500	1330
Ball Indentation Hardness	ISO 2039-1	N/mm <sup>2</sup>	125 / HB 358	140 / HB 358	94 / HB 358
<b>Thermal Properties</b>					
Vicat Softening Temperature VST/B/50 (50N, 50°C/h)	ISO 306	°C	77	93	100
Heat Deflection Temperature A; (1.8 MPa)	ISO 75	°C	57	58	77
Heat Deflection Temperature B; (0.45 MPa)	ISO 75	°C	83	96	96
<b>Other Properties</b>					
Density	ISO 1183	g/cm <sup>3</sup>	1,4	1,5	1,3
Melt Flow Rate [190 °C & 2.16 kg / 200 C & 5 kg]	ISO 1133	g/10 min	18 / 29	16 / 25	20 / 69
Linear Mould Shrinkage*	ISO 294-4	%	0,2-0,5	0,1-0,4	0,9-1,0
Biocontent			≈75%	≈75%	≈50%
Food approval**			Yes	Yes	Yes
Compostability***	EN 13432		Yes	Yes	Yes

The properties stated above are not for specification purposes.

Values have been measured with samples produced with mould temperature 30°C if not otherwise stated

\* Shrinkage value is measured from test part (4x70x150mm) that is moulded at 30°C mould temperature.

\*\* Please contact your ABM Sales or Technical representative for further information

\*\*\* Grades are manufactured from certified compostable plastics according to the EN 13432 standard

## ABM -World's strongest biodegradable composite materials

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