Elix ABS M205FC

Injection Moulding grade for medical applications (e.g. inhalers, roller clamps, spikes, etc.)/ Biocompatible with up to 30 days human contact duration according to USP Class VI and ISO 10993-1. Food contact acc. to BfR and FDA, DMF registered. Good flowing, standard impact strength

Property	Test Condition	Unit	Standard	Value
Rheological properties				
Melt volume-flow rate	220 °C; 10 kg	cm³/(10 min)	ISO 1133	20
Molding shrinkage, parallel	150x105x3; 500 bar	%	acc. ISO 2577	0.5
Molding shrinkage, normal	150x105x3; 500 bar	%	acc. ISO 2577	0.5
Mechanical properties (23 °C/50 % r. h.)				
Yield stress	50 mm/min	MPa	ISO 527-1,-2	50.5
Tensile Stress at break	50 mm/min	MPa	ISO 527-1,-2	36.5
Tensile Strain at break	50 mm/min	%	acc. ISO 527-1,-2	> 15
Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2550
Flexural strength	2 mm/min	MPa	ISO 178	75
Flexural modulus	2 mm/min	MPa	ISO 178	2600
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	15
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	7
Yield strain	50 mm/min	%	ISO 527-1,-2	2.6
Nominal strain at break	50 mm/min	%	ISO 527-1,-2	20
Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	124
Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	100
Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	16
Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	7
Ball indentation hardness		N/mm²	ISO 2039-1	106
Thermal properties				
Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	94
Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	98
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	101
Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	98
Burning behavior UL 94 (1.6 mm)	1.6 mm	Class	UL 94	HB
Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.78
Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.81
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650
Electrical properties (23 °C/50 % r. h.)				
Relative permittivity	100 Hz	-	IEC 60250	3.04
Relative permittivity	1 MHz	-	IEC 60250	2.82
Dissipation factor	100 Hz	10^{-4}	IEC 60250	53
Dissipation factor	1 MHz	10^{-4}	IEC 60250	96
Volume resistivity		Ohm·m	IEC 60093	2E+14
Surface resistivity		Ohm	IEC 60093	2E+17

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Other properties (23 °C)				
Density		g/cm³	ISO 1183	1055
Processing conditions for test specimens				
Injection molding-Melt temperature		°C	ISO 294	240
Injection molding-Mold temperature		°C	ISO 294	70
Injection molding-Injection velocity		mm/s	ISO 294	240

Disclaimer

Disclaimer for sales products

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Test values styrenics

Unless specified to the contrary, the values given have been established on standardised test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the colouring. This is valid especially for CTI.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

ELIX Polymers , SL. Crta. Vila-seca a La Pineda, s/n 43110 La Canonja (Tarragona).

info@elix-polymers.com