

Technical Data Sheet



ALCOM PBT 700/1 GF30 TF15 SI2

MOCOM

Base Polymer	Polybutylene Terephthalate
Filler/Additive System	30 % glass fibres, 15 % PTFE, 2 % silicone
Special Features	improved sliding / wear, heat stabilised, high stiffness
Market Segment	Automotive, Machinery
Application Area	gear wheels, roller bearings
Typical Applications	functional components, bearings and sliding elements

Pre-Drying Conditions	in a dry air (dessiccant) dryer 100-120 °C for 2-4 h in an air circulating dryer 100-120 °C for 4-8 h dependant on moisture content
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Processing Injection Moulding	melt temperature 250-270 °C mould temperature 80-120 °C
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Storage	dry, protected from light
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Properties	Value	Dimension	Test Norm
Mechanical Properties			
Flexural Modulus	8600	MPa	ISO 178
Flexural Strength	175	MPa	ISO 178
Tensile Modulus	9800	MPa	ISO 527
Tensile Strength at Break	115	MPa	ISO 527
Tensile Elongation at Break	2.6	%	ISO 527
Impact Strength (Charpy, 23 °C)	50	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy, -40 °C)	50	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy, 23 °C)	9	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy, -40 °C)	9	kJ/m ²	ISO 179/1eA
Thermal Properties			
Vicat B50	212	°C	ISO 306
HDT / A (1,8 MPa)	214	°C	ISO 75-1/-2
DSC (Melt Point)	227	°C	ISO 11357
Rheological Properties			
Shrinkage (lengthwise, 24h)	0.2 - 0.4	%	ISO 294-4
Shrinkage (lateral, 24h)	0.5 - 0.7	%	ISO 294-4
Physical Properties			
Density	1630	kg/m ³	ISO 1183

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Tribologic Properties

Coefficient of Sliding Friction μ ($pv = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	0.28	-	ASTM G 137
Coefficient of Sliding Friction μ_H ($pv = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	0.19	-	ASTM G 137
Specific Wear Rate ws ($pv = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	1.2	E-6 mm^3/Nm	ASTM G 137
Linear Wear Rate w ($pv = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	21	$\mu\text{m/h}$	ASTM G 137