

Technical Data Sheet



ALCOM POM 770/1 PTFE15

Base Polymer	Polyoxymethylene Copolymer
Filler/Additive System	15 % PTFE
Special Features	improved sliding / wear
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 100-110 °C for 2-3 h in an air circulating dryer 100-110 °C for 3-5 h dependant on moisture content
Processing Injection Moulding	melt temperature 180-220 °C mould temperature 60-100 °C
Storage	dry, protected from light

Properties	Value	Dimension	Test Norm
Mechanical Properties			
Flexural Modulus	2200	MPa	ISO 178
Flexural Stress (3.5% Strain)	60	MPa	ISO 178
Tensile Modulus	2250	MPa	ISO 527
Tensile Strength	50	MPa	ISO 527
Tensile Elongation at Break	13	%	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)	4.5	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy, -40°C)	3.5	kJ/m ²	ISO 179/1eA
Thermal Properties			
Vicat B50	145	°C	ISO 306
HDT / A (1,8 MPa)	90	°C	ISO 75-1/-2
DSC (Melt Point)	173	°C	ISO 11357
Rheological Properties			
Melt Index (MVR)	6	cm ³ /10min	ISO 1133
MVR temperature	190	°C	-
MVR load	2.16	kg	-
Shrinkage (lengthwise, 24h)	2 - 2.4	%	ISO 294-4
Shrinkage (lateral, 24h)	1.9 - 2.3	%	ISO 294-4
Physical Properties			
Density	1480	kg/m ³	ISO 1183

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Tribologic Properties

Coefficient of Sliding Friction μ ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	0.25	-	ASTM G 137
Coefficient of Sliding Friction μ_H ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	0.16	-	ASTM G 137
Specific Wear Rate w_s ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	0.5	E-6 mm^3/Nm	ASTM G 137
Linear Wear Rate w ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	9	$\mu\text{m/h}$	ASTM G 137

Diagrams

Stress-Strain

