

Application purpose and characteristics

Conveyor technology, mechanical engineering, automotive industry, precision engineering, food-, packaging- and paper industry, fixture construction

High stiffness, strength and toughness, good chemical resistance, difficult to bond, good slide and wear properties, good machinability. Produced by bio-based / biomass-balanced raw material.

Material name, short description	POM-C
Material name, based on technical standards	Polyoxymethylene copolymer
Density	1.41 g/cm ³
Color	natural (white)
Compound code	POM-C bio.002-01
Remarks	-44% Carbon Footprint CO ₂ emissions compared to the counterpart POM-C 00.002-00

Thermal attributes

Max. operating temperature long term	100 °C
Max. operating temperature short term	140 °C
Coefficient of linear thermal expansion 1	13 · 10 ⁻⁵ K ⁻¹ DIN EN ISO 11359-1,-2 23-60°C, long.
Coefficient of linear thermal expansion 2	14 · 10 ⁻⁵ K ⁻¹ DIN EN ISO 11359-1,-2 23-100°C, long.
Crystalline melting point	166 °C DIN EN ISO 11357
Glass transition temperature	-60 °C DIN EN ISO 11357
Specific heat capacity	1.4 J/(g·K) ISO 22007-4 2008
Thermal conductivity	0.39 W/(m·K) ISO 22007-4 2008

Electrical attributes

Comparative tracking index	600 CTI DIN EN 60112 Platin electrode, 23°C, 50% r.h., solven
Dielectric strength 1	49 kV/mm ISO 60243-1 23°C, 50% r.h.
Surface resistivity	10 ¹⁴ Ω DIN IEC 60093 Silver electrode, 23°C, 12% r.h.
Volume resistivity	10 ¹⁴ Ω*cm DIN IEC 60093 Silver electrode, 23°C, 12% r.h.

In compliance with EU REACH regulation and EU ROHS directives. The information about compliance are intended to provide guidance on the use of our material. The document does not replace a declaration of conformity and does not relieve the user to require information on specific approval. This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.

Mechanical properties

Modulus of elasticity & tension 1	2800 N/mm ² DIN EN ISO 527-2 1mm/min
Tensile strength	67 N/mm ² DIN EN ISO 527-2 50mm/min
Yield stress	91 N/mm ² DIN EN ISO 178 2mm/min, 10 N
Elongation at break	32 % DIN EN ISO 527-2 50mm/min
Elongation at yield	9 % DIN EN ISO 527-2 50mm/min
Flexural modulus of elasticity	2600 N/mm ² DIN EN ISO 178 2mm/min, 10 N
Modulus of pressure	2300 N/mm ² 5mm/min, 10 N
Bending strength 1	67 N/mm ² DIN EN ISO 527-2 50mm/min
Compressive strength 1	20 N/mm ² EN ISO 604 1% 5mm/min, 10 N
Compressive strength 2	35 N/mm ² EN ISO 604 2% 5mm/min, 10 N
Compressive strength 3	68 N/mm ² EN ISO 604 5% 5mm/min, 10 N
Hardness nominal value	82 Shore D DIN EN ISO 868
Impact strength	0 no break DIN EN ISO 179-1eU max. 7,5J
Notch impact strength	8.00 kJ/m ² DIN EN ISO 179-1eA max. 7,5J

Other attributes

Water absorption	0.05 % DIN EN ISO 62 24h (23°C)
Water absorption 2	0.1 % DIN EN ISO 62 96h (23°C)

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Approvals / Compliance

Flammability	UL 94 HB
Food & Beverage	FDA CFR 21 - 177.2470 "Polyoxymethylene copolymer" for all food types up to 65°C, except those containing more than 15% alcohol.
	EC No. 1935/2004 incl. last amendments
	EC No. 2023/2006 "Good Manufacturing Practices, GMP"
	Regulation EU 10/2011 incl. last amendments



EC No.1935:2004



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