

APSOplast® POM-C EC black

Engineering Plastic Technology Technical Data Sheet

Application purpose and characteristics

POM-C EC, black is particularly suited to applications in the safety sector, explosion protection field (e. g. ATEX), electronic protection, transport and mechanical conveying and handling, etc.

This POM-C contains conductive carbon black and is thus electrically conductive. High UV resistance. Good resistance against many solvents.

Product description

Material name, long description	Polyoxymethylene copolymer
Material name, short description	POM-C
Compound	POM-C + conductive carbon black
Material Code	POM-C EC.002-00
Density	1.41 g/cm ³
Color	black

Mechanical properties

Modulus of elasticity and tension	Test value: 1800 MPa Test norm: DIN EN ISO 527-2 Test parameter: 1 mm/min
Tensile strength	Test value: 42 MPa Test norm: DIN EN ISO 527-2
Yield stress	Test parameter: 50 mm/min
Elongation at yield	Test value: 11 % Test norm: DIN EN ISO 527-2
Elongation at break	Test parameter: 50 mm/min
Flexural modulus of elasticity	Test value: 1500 MPa Test norm: DIN EN ISO 178 Test parameter: 2 mm/min, 10 N
Bending strength	Test value: 56 MPa Test norm: DIN EN ISO 178 Test parameter: 2 mm/min, 10 N
Modulus of pressure	Test value: 1500 MPa Test norm: EN ISO 604 Test parameter: 5 mm/min, 10 N
Compressive strength	Test value: 16 MPa Test norm: EN ISO 604 Test parameter: at 1% deformation (5 mm/min, 10 N)
	Test value: 25 MPa Test norm: EN ISO 604 Test parameter: at 2% deformation (5 mm/min, 10 N)
Impact strength	Test value: 74 kJ/m ² Test norm: DIN EN ISO 179-1eU Test parameter: max. 7.5 J
Ball indentation hardness	Test value: 96 MPa Test norm: ISO 2039-1

Thermal properties

Max. operating temperature long term	Test value: 100 °C
Max. operating temperature short term	Test value: 140 °C
Glass transition temperature	Test value: -60 °C Test norm: DIN 53765
Crystalline melting point	Test value: 169 °C Test norm: DIN 53765

Thermal expansion	Test value: $13 \cdot 10^{-5} \cdot K^{-1}$ Test norm: DIN EN ISO 11359-1,-2 Test parameter: 23 - 60 °C, long.
	Test value: $14 \cdot 10^{-5} \cdot K^{-1}$ Test norm: DIN EN ISO 11359-1,-2 Test parameter: 23 - 100 °C, long.
Specific heat capacity	Test value: 1.30 J/g·K Test norm: ISO 22007-4 2008
Thermal conductivity	Test value: 0.46 W/m·K Test norm: ISO 22007-4 2008

Electrical properties

Volume resistivity	Test value: $10^3 - 10^5 \text{ Ohm}\cdot\text{cm}$ Test norm: DIN EN 61340-2,-3 Test parameter: Conductive rubber, 23 °C, 12 % r.h.
Surface resistivity	Test value: $10^2 - 10^4 \text{ Ohm}$ Test norm: DIN EN 61340-2,-3 Test parameter: Conductive rubber, 23 °C, 12 % r.h.

Other properties

Flammability	Test value: HB Test norm: DIN IEC 60695-11,-10 Test parameter: UL94
Water absorption at saturation	Test value: 0.05 / 0.2 % Test norm: DIN EN ISO 62 Test parameter: 24 h / 96 h (23 °C)