

APSOplast® POM-C ED natural (beige)

Engineering Plastic Technology Technical Data Sheet

Application purpose and characteristics

POM-C ED is an excellent choice for retaining devices used for the conveyance of silicon wafers in production processes or for the manufacture of sensitive electronic components including hard disks and PCBs.

POM-C ED is an electrostatically dissipative material based on acetal. It is extremely suited to applications in conveyor technology. It avoids problems resulting from discharge on parts touched by people.

Product description

Material name, long description	Polyoxymethylene copolymer
Material name, short description	POM-C
Material Code	POM-C ED.004-00
Density	1.33 g/cm ³
Color	natural (beige)

Mechanical properties

Modulus of elasticity and tension	Test value: 1500 MPa Test norm: ISO 527-1,-2
Tensile strength	Test value: 38 MPa Test norm: ISO 527-1,-2
Elongation at break	Test value: 15 % Test norm: ISO 527-1,-2
Yield at break	Test value: 38 MPa Test norm: ISO 527-1,-2
Compressive strength	Test value: 14 N/mm ² Test norm: ISO 604 Test parameter: at 1% nominal strain
	Test value: 25 N/mm ² Test norm: ISO 604 Test parameter: at 2% nominal strain
	Test value: 38 N/mm ² Test norm: ISO 604 Test parameter: at 5% nominal strain
Notch impact strength	Test value: 8 kJ/m ² Test norm: DIN EN ISO 179-1eA Test parameter: Charpy
Impact strength	Test value: no break kJ/m ² Test norm: DIN EN ISO 179-1eU Test parameter: Charpy
Ball indentation hardness	Test value: 70 MPa Test norm: ISO 2039-1
Hardness	Test value: R 106 Test norm: ISO 2039-2

Thermal properties

Min. operating temperature	Test value: -50 °C
Max. operating temperature long term	Test value: 90 °C Test parameter: minimum 20000 h
Max. operating temperature short term	Test value: 140 °C
Crystalline melting point	Test value: 165 °C Test norm: ISO 11357-1,-3 Test parameter: DSC, 10°C/Min
Coefficient of linear thermal expansion	Test value: 150 x 10 ⁻⁶ K ⁻¹ Test parameter: Average between 23 and 100°C

Electrical properties

Dielectric loss factor	Test value: 0.036 Test norm: IEC 60250 Test parameter: at 1 MHz
Dielectric constant	Test value: 4.3 Test norm: DIN IEC 60250 Test parameter: at 1 MHz
Volume resistivity	Test value: 10 ⁹ - 10 ¹¹ Ohm*cm Test norm: IEC 60093
Surface resistivity	Test value: 10 ⁹ - 10 ¹¹ Ohm Test norm: ANSI/ESD STM 11.11

Other properties

Flammability	Test value: < 20 Test norm: ISO 4589-1, -2 Test parameter: Oxygen Index
	Test value: HB/HB Test norm: UL 94 Test parameter: Thickness 1.5/3 mm
Moisture absorption	Test value: 0.8 % Test parameter: at saturation in normal clima of 23°C / 50 % RF
Water absorption at saturation	Test value: 10 % Test parameter: at saturation in water of 23°C