

APSOplast® PF CP grey

Engineering Plastic Technology Technical Data Sheet

Application purpose and characteristics

APSOplast PF CP MF serves as insulating construction material for components in electrical equipment such as cell and pole partitions for medium and high voltage switch-gear cabinets. It is also used for cover plates for switch-gear cabinets, switching apparatus in telephone installations, ships, industrial plants and power stations. Also for base plates of cable junction boxes, panels in household consumer units and fuse boxes as well as for control panels in a wide range of electrical applications.

This laminated paper is coated with a layer of melamine resin on both sides. It has extremely high track resistance and dielectric strength, is scratch-resistant and generally resistance to chemicals. This material can easily be labelled, printed, laminated and is flame-retardant (halogen free).

Product description

Material name, long description	Phenolic resin laminated paper fabrics
Material name, short description	PF CP
Compound	PF CP + MF-top-layer
Material Code	PF CP MF.020-00
Density	1.4 g/cm ³
Color	grey

Mechanical properties

Tensile strength	Test value: 100 MPa Test norm: DIN 53455
Flexural modulus of elasticity	Test value: 7000 MPa Test norm: DIN 53457
Bending strength	Test value: 130 MPa Test norm: DIN 53452
Compressive strength	Test value: 150 N/mm ² Test norm: DIN 53454 Test parameter: Parallel to the layer
Notch impact strength	Test value: 4 kJ/m ² Test norm: DIN 53453 Test parameter: Charpy parallel to the layer
Impact strength	Test value: 15 kJ/m ² Test norm: DIN 53453

Thermal properties

Coefficient of linear thermal expansion	Test value: 20 - 40 10 ⁻⁶ /K Test norm: VDE 0304
Thermal class	Test value: E
Thermal conductivity	Test value: 0.2 W/m·K Test norm: DIN 52612
Limit temperature	Test value: 120 °C Test norm: VDE 0304

Electrical properties

Dielectric loss factor	Test value: <0.08 Test norm: DIN 53483 Test parameter: 50 Hz
Dielectric constant	Test value: 5 Test norm: DIN 53483
Dielectric strength	Test value: 25 kV/mm Test norm: DIN 53481 Test parameter: Vertical to the layer in oil at 90 °C Test value: 20 kV Test norm: DIN 53481 Test parameter: Parallel to the layer in oil at 90°C

Creep resistance	Test value: 600 Test norm: IEC 112
Arc resistance	Test value: L1 Test parameter: DIN 53484
Insulation resistance	Test value: 10 ⁹ Ohm Test norm: DIN 53482 Test parameter: After dip into water

Other properties

Flammability	Test value: V2 Test norm: UL 94 Test parameter: Thickness ≤ 6mm Test value: V0 Test norm: UL 94 Test parameter: Thickness ≥ 8mm
Water absorption at saturation	Test value: 80 mg Test norm: DIN 53495 Test parameter: thickness 3 mm