

**TECHNICAL DATA SHEET**

# Bakelite® PF 6510

Bakelite Synthetics  
PF-(GF+X)

**Processing**

Injection molding, Transfer molding

**Product Text**
**Product Information**
**Product description:**

Phenolic moulding compound, inorganically filled, glass fibre reinforced, high dimensional stability at raised temperature, good media resistance, heat-resistant.

**Application areas:**

Thermally and mechanically highly stressed parts in automotive field, water pump housing, cooling media resistant.

Property Name	Value	Unit	Standard No.
Apparent density (moulding compound)	0.74	g/cm <sup>3</sup>	ISO 60
Moulding shrinkage (injection moulding, longitudinal)	0.2	%	ISO 2577
Post shrinkage (injection moulding, 168h/110°C)	0.05	%	ISO 2577
Tensile strength (5mm/min)	100	MPa	ISO 527-1/2
Compr. strength (test spec. flat tested)	260	MPa	ISO 604
Flexural strength (2mm/min)	210	MPa	ISO 178
Flexural modulus	16000	MPa	ISO 178
Water absorption (24h/23°C)	12	mg	similar to ISO 62

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Additional characteristics:

high mechanical strength

## Preparation of Test Specimens of Thermosetting Moulding Compound

- Compression to ISO 295
- Injection to ISO 10724

## Storage capability

2 years (relative humidity of 50-60% and maximum storage temperature of approximately 20°C)

Processing/Physical Characteristics	Value	Unit	Standard
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Mechanical Properties	Value	Unit	Standard
Tensile modulus	16000	MPa	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	15.5	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	4	kJ/m <sup>2</sup>	ISO 179/1eA
Thermal Properties	Value	Unit	Standard
Temp. of deflection under load, 8.00 MPa	175	°C	ISO 75-1/-2
Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	5.5		IEC 62631-2-1
Dissipation factor, 100Hz	0.05	E-4	IEC 62631-2-1
Volume resistivity	1E10	Ohm*m	IEC 62631-3-1
Surface resistivity	1E11	Ohm	IEC 62631-3-2
Electric strength	32	kV/mm	IEC 60243-1
Other Properties	Value	Unit	Standard
Density	1700	kg/m <sup>3</sup>	ISO 1183
Test Specimen Production	Value	Unit	Standard
Injection molding, injection temperature	115	°C	ISO 10724
Injection molding, injection velocity	170	mm/s	ISO 10724
Injection molding, hold pressure	100	MPa	ISO 10724
Injection molding, cure time	25	min	ISO 10724
Compression molding, mold temperature	160	°C	ISO 295
Compression molding, cure time	1	min	ISO 295

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## **Injection molding**

VERARBEITUNG

Temperature of material:	80 - 100	°C
Mould temperature:	160 - 190	°C
Curing time:	10-20	sec

Further Information:

Barrel temperature

- Feed zone:	60-75	°C
- Nozzle zone:	80-100	°C
Cavity moulding pressure:	>15	MPa
Back pressure:	0.5-2	MPa
Holding pressure:	60% of injection pressure	

## **Compression molding**

PROCESSING

Mould temperature:	160-190	°C
Curing time:	20-40	sec
Cavity moulding pressure:	>15	MPa