Bakelite® PF 1141

PF-(GF+X) Momentive Specialty Chemicals

Product Texts

Product description:

Phenolic moulding compound, inorganically/organically filled, glass fibre reinforced, increased heat resistance, hot steam and hot water resistant (Not suitable for use of higher voltage).

Application areas:

Fittings for ovens and dishwashers, cookware fittings.

Property Name	Value	Unit	Standard No.
Apparent density (moulding compound)	0.78	g/cm³	ISO 60
Moulding shrinkage (injection moulding, longitudinal)	0.6	%	ISO 2577
Post shrinkage (injection moulding, 168h/110°C)	0.3	%	ISO 2577
Compr. strength (test spec. flat tested)	200	MPa	ISO 604
Flexural strength (2mm/min)	90	MPa	ISO 178
Flexural modulus	8000	MPa	ISO 178
Ball indentation hardness (H 961/30)	350	MPa	ISO 2039/P1
Water absorption (24h/23°C)	20	mg	similar to ISO 62

Additional characteristics: A, HT, M

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)

Rheological properties	Value	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.6	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Charpy impact strength (+23°C)	6	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	1.9	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 8.00 MPa	135	°C	ISO 75-1/-2

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	13	-	IEC 60250
Dissipation factor, 100Hz	0.2	E-4	IEC 60250
Volume resistivity	1E9	Ohm*m	IEC 60093
Surface resistivity	1E10	Ohm	IEC 60093
Electric strength	5.5	kV/mm	IEC 60243-1

Other properties	Value	Unit	Test Standard
ISO Data			
Density	1520	kg/m³	ISO 1183

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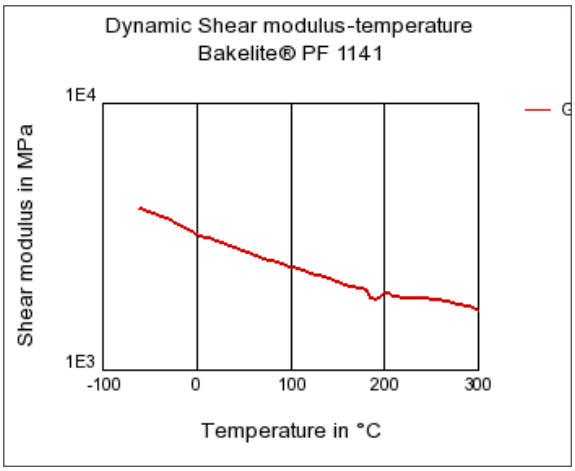
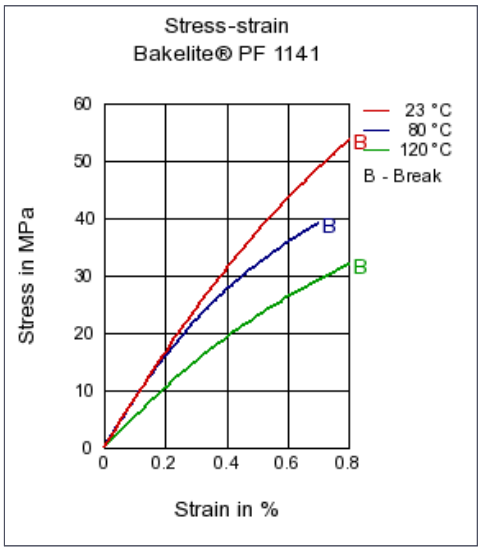
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, injection temperature	115	°C	ISO 10724
Injection Molding, injection velocity	170	mm/s	ISO 10724
Injection Molding, hold pressure	100	MPa	ISO 10724
Injection Molding, cure time	25	min	ISO 10724
Compression Molding, mold temperature	160	°C	ISO 295
Compression Molding, cure time	1	min	ISO 295

Diagrams

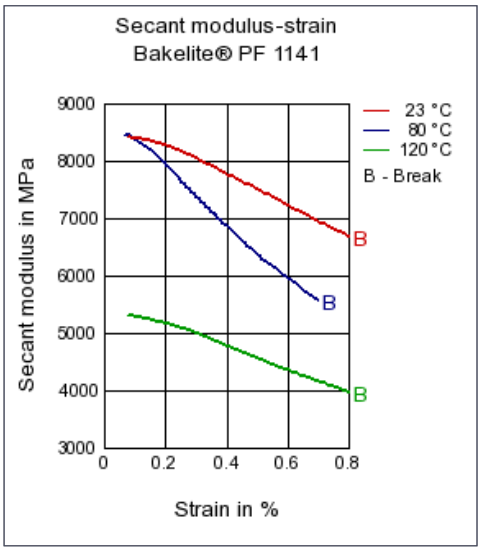
Dynamic Shear modulus-temperature



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding, Transfer Molding

Other text information

Injection Molding

VERARBEITUNG Temperature of material:	105-115	°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: d>	>15	MPa

Compression molding

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