Bakelite® PF 2400

PF-X Momentive Specialty Chemicals

Product Texts

Product description:

Phenolic moulding compound, inorganically/organically filled, average heat resistance, increased dimensional stability, dish washer proof, UL listed moulding compound 1.5 mm / V-0 (ALL).

Application areas:

MCB-housings, cookware fittings, meter covers and bases, knobs/handles.

Property Name	Value	Unit	Standard No.
Apparent density (moulding compound)	0.65	g/cm³	ISO 60
Moulding shrinkage (injection moulding, longitudinal)	0.65	%	ISO 2577
Post shrinkage (injection moulding, 168h/110°C)	0.75	%	ISO 2577
Moulding shrinkage (compression moulding, longitudinal)	0.45	%	ISO 2577
Post shrinkage (compression moulding, 168h/110°C)	0.45	%	ISO 2577
Tensile strength (5mm/min)	55	MPa	ISO 527-1/2
Compr. strength (test spec. flat tested)	250	MPa	ISO 604
Flexural strength (2mm/min)	95	MPa	ISO 178
Flexural modulus	8000	MPa	ISO 178
Ball indentation hardness (H 961/30)	340	MPa	ISO 2039/P1
Water absorption (24h/23°C)	50	mg	similar to ISO 62

Additional characteristics: A, M, UL

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	0.8	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	7500	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	7	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	1.5	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 8.00 MPa	125	°C	ISO 75-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	UL	-	-

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	10	-	IEC 60250
Dissipation factor, 100Hz	0.25	E-4	IEC 60250

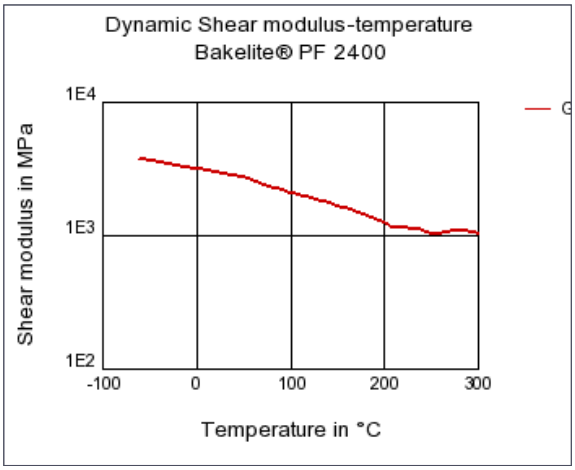
Volume resistivity	1E9	Ohm*m	IEC 60093
Surface resistivity	1E10	Ohm	IEC 60093
Electric strength	25	kV/mm	IEC 60243-1
Comparative tracking index	125	-	IEC 60112

Other properties	Value	Unit	Test Standard
ISO Data			
Density	1470	kg/m³	ISO 1183

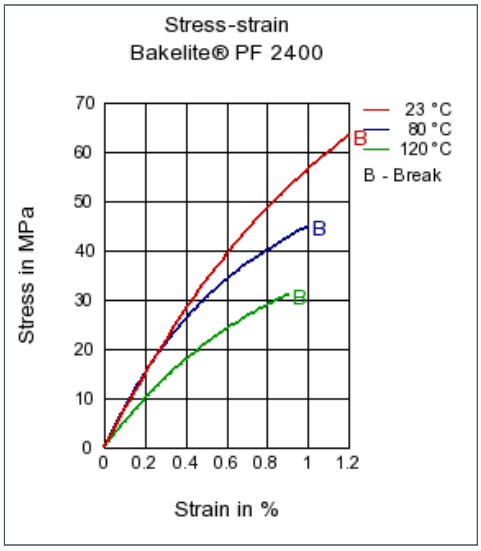
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, injection temperature	115	°C	ISO 10724
Injection Molding, injection velocity	170	mm/s	ISO 10724
Injection Molding, hold pressure	100	MPa	ISO 10724
Injection Molding, cure time	25	min	ISO 10724
Compression Molding, mold temperature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

Diagrams

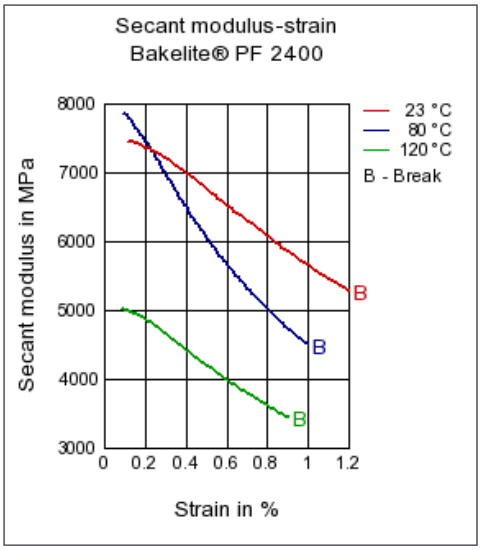
Dynamic Shear modulus-temperature



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
	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