


Bakelite® PF 31

PF-X

Momentive Specialty Chemicals

Product Texts
Product description:

Phenolic moulding compound, mainly organically filled, standard moulding compound for normal stress, UL listed moulding compound 1.5 mm / V-1 (ALL), 3.0 mm / V-0 (ALL), standardized moulding compound.

Application areas:

Mouldings of all kinds from screw caps to large casings, electrical installation material, handle casings (bars), pan handles, operating elements, toaster parts and pistons for braking power energizers, carbon brush holders, lamp casing parts, decor items, ashtrays.

Property Name	Value	Unit	Standard No.
Apparent density (moulding compound)	0.6	g/cm ³	ISO 60
Moulding shrinkage (injection moulding, longitudinal)	0.8	%	ISO 2577
Post shrinkage (injection moulding, 168h/110°C)	0.55	%	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)	50	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	7500	MPa	ISO 178
Ball indentation hardness (H 961/30)	320	MPa	ISO 2039/P1
Water absorption (24h/23°C)	60	mg	similar to ISO 62

Additional characteristics:

UL, Typ

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			
ISO Data			
Tensile Modulus	7500	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	7	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	1.5	kJ/m ²	ISO 179/1eA
Thermal properties			
ISO Data			
Temp. of deflection under load, 8.00 MPa	120	°C	ISO 75-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-1	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	UL	-	-
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	3.0	mm	IEC 60695-11-10
UL recognition	UL	-	-

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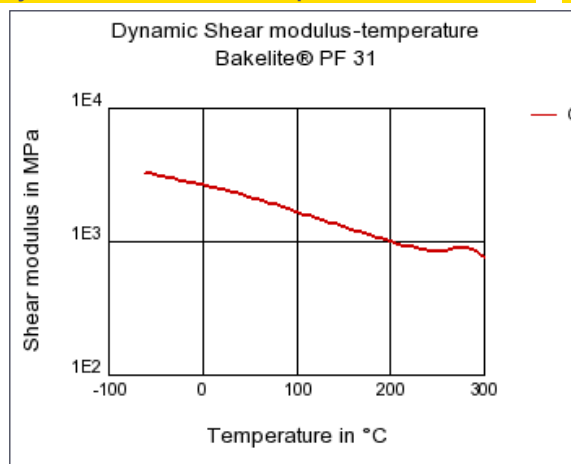
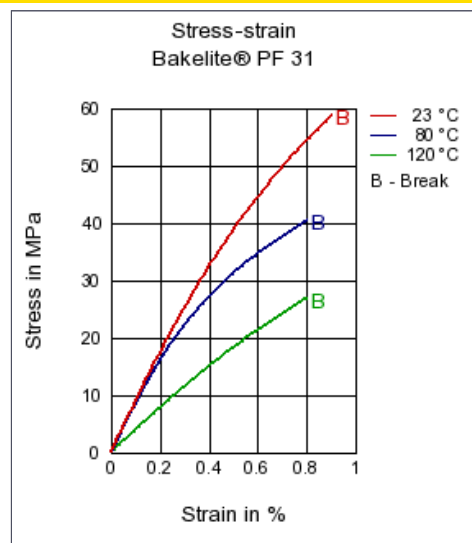
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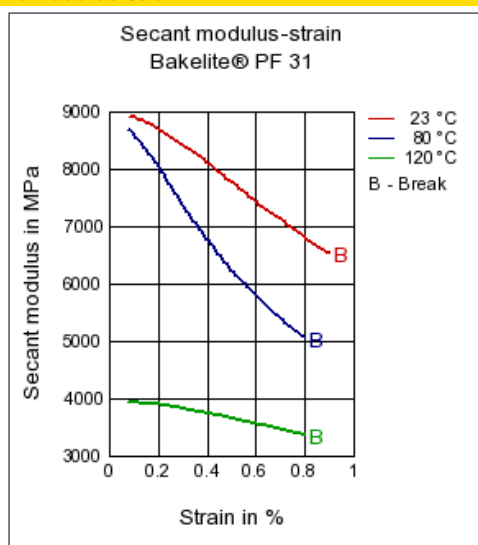
Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	11	-	IEC 60250
Dissipation factor, 100Hz	0.3	E-4	IEC 60250
Volume resistivity	1E9	Ohm*m	IEC 60093
Surface resistivity	1E10	Ohm	IEC 60093
Electric strength	22	kV/mm	IEC 60243-1
Comparative tracking index	125	-	IEC 60112

Other properties	Value	Unit	Test Standard
ISO Data			
Density	1420	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