Bakelite® UP 3620

UP-X Momentive Specialty Chemicals

Product Texts

Product description:

Polyester moulding compound, mainly organically filled, styrene free, processing shrinkage as for phenolic moulding compounds, non flammable, high surface quality, UL listed moulding compound 1,5 mm / V-0 (ALL).

Application areas:

Lamp housings, neon tubes end parts and bases, switch gears, watt hour meters housings and base plates.

Property Name	Value	Unit	Standard No.
Apparent density (moulding compound)	0.7	g/cm³	ISO 60
Moulding shrinkage (injection moulding, longitudinal)	0.75	%	ISO 2577
Post shrinkage (injection moulding, 168h/110°C)	0.25	%	ISO 2577
Moulding shrinkage (compression moulding, longitudinal)	0.6	%	ISO 2577
Post shrinkage (compression moulding, 168h/110°C)	0.25	%	ISO 2577
Tensile strength (5mm/min)	50	MPa	ISO 527-1/2
Compr. strength (test spec. flat tested)	180	MPa	ISO 604
Flexural strength (2mm/min)	85	MPa	ISO 178
Flexural modulus	8000	MPa	ISO 178
Ball indentation hardness (H 961/30)	250	MPa	ISO 2039/P1
Water absorption (24h/23°C)	70	mg	similar to ISO 62

Additional characteristics: A, UL

Preparation of Test Specimens of Thermosetting Moulding Compound

- Compression to ISO 295
- Injection to ISO 10724

Storage capability

12 month (shorter shelf life for darker colours), (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	8500	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	7.5	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	1.8	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 8.00 MPa	75	°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	5	-	IEC 60250
Dissipation factor, 100Hz	0.02	E-4	IEC 60250

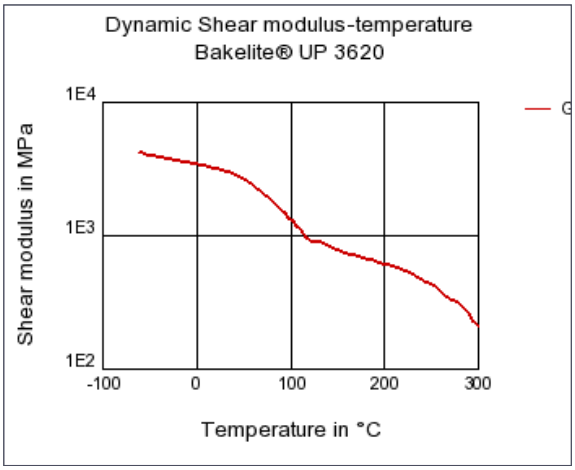
Volume resistivity	1E10	Ohm*m	IEC 60093
Surface resistivity	1E11	Ohm	IEC 60093
Electric strength	29.5	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

Other properties	Value	Unit	Test Standard
ISO Data			
Density	1720	kg/m³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, injection temperature	105	°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



Characteristics

Processing
Injection Molding, Transfer Molding

Other text information

Injection Molding

VERARBEITUNG		
Temperature of material:	100-110	°C
Mould temperature:	160-190	°C
Curing time:	10-20	sec
Further Information:		
Barrel temperature		
- Feed zone:	50-70	°C
- Nozzle zone:	70-100	°C
Cavity moulding pressure:	>10	MPa
Back pressure:	0.5-1	MPa
Holding pressure:	60% of injection pressure	

Compression molding
PROCESSING

Mould temperature:	160-180	°C
Curing time:	20-40	sec
Cavity moulding pressure:	>10	MPa