

Datasheet

Durethan BM25FN20 700350

PA 6, 25% mineral, injection molding, halogen free flame retardant, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,MD25 FR(30),GF2HR,S14-060

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.9	
C Molding shrinkage, transverse	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.9	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.2	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.2	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	6200	2300
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	80	35
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.2	11
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	38	135
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	30	100
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	5500	2000
Flexural strength	2 mm/min	MPa	ISO 178-A	135	50
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.5	6.8
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	130	43
Ball indentation hardness		N/mm ²	ISO 2039-1	178	70
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	220	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	90	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	195	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	206	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.6	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7	
C Burning behavior UL 94	1.5 mm	Class	UL 94	V-2	
C Burning behavior UL 94	0.75 mm	Class	UL 94	V-2	
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	205	
Glow wire test (GWFI)	0.75 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	725	
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	725	
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	725	
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	205	

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Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.
Electrical properties (23 °C/50 % r. h.)				
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	450
Comparative tracking index CTI	Solution A	PLC	UL 746A	1
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	6.7
C Density		kg/m ³	ISO 1183	1380
Bulk density		kg/m ³	ISO 60	700
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	260
C Injection molding-Mold temperature		°C	ISO 294	80
Processing recommendations				
Drying temperature dry air dryer		°C	-	80
Drying time dry air dryer		h	-	2-6
Residual moisture content		%	Acc. to Karl Fischer	0.03-0.07
Melt temperature (Tmin - Tmax)		°C	-	250-270
Mold temperature		°C	-	80-100

Notes

1 Typical properties: these are not to be construed as specifications

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

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