

Durethan BM230H2.0 901510

PA 6, 30 % mineral, injection molding, heat-aging stabilized, low tendency to warp, isotopic properties

ISO Shortname: ISO 16396-PA 6,MD30,GHR,S14-050

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
Molding shrinkage, parallel	150x105x3; 280 °C / MT 80 °C; 500 bar	%	acc. ISO 2577	1.08	
Molding shrinkage, transverse	150x105x3; 280 °C / MT 80 °C; 500 bar	%	acc. ISO 2577	1.12	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.32	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.3	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	5000	2000
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	80	50
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	10	45
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	120	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	80	80
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	< 10	13
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	< 10	< 10
Charpy notched impact strength	-40 °C	kJ/m ²	ISO 179-1eA	< 10	< 10
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	122	N
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	80	95
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Izod notched impact strength	-40 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Flexural modulus	2 mm/min	MPa	ISO 178-A	4700	1800
Flexural strength	2 mm/min	MPa	ISO 178-A	140	60
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5.5	8.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	130	55
C Puncture maximum force	23 °C	N	ISO 6603-2	4694	
C Puncture maximum force	-30 °C	N	ISO 6603-2	1132	
C Puncture energy	23 °C	J	ISO 6603-2	19.1	
C Puncture energy	-30 °C	J	ISO 6603-2	4.2	
Ball indentation hardness		N/mm ²	ISO 2039-1	180	80
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	222	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	~70	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	~185	
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	~50	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	> 200	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.9	
Burning behavior UL 94 (1.6 mm)	1.6 mm	Class	UL 94	HB	
Burning behavior UL 94	3.2 mm	Class	UL 94	HB	
C Oxygen index	Method A	%	ISO 4589-2	25	
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650	



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Burning behavior US-FMVSS302	>=1.0 mm		ISO 3795	passed	
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	200	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	4.3	16
C Relative permittivity	1 MHz	-	IEC 60250	3.9	4.7
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	80	3250
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	180	1100
C Volume resistivity		Ohm·m	IEC 60093	1E12	1E10
C Surface resistivity		Ohm	IEC 60093	1E16	1E13
C Electric strength	1 mm	kV/mm	IEC 60243-1	29	27
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	525 (475)	
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	200 M	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	~7.0	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	~2.2	
C Density		kg/m ³	ISO 1183	1360	
Bulk density		kg/m ³	ISO 60	~800	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	280	
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	0.03-0.12	
Melt temperature (T _{min} - T _{max})		°C	-	270-290	
Mold temperature		°C	-	80-120	

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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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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