

Durethan BM240H3.0 000000

PA 6, 40 % mineral, injection molding, heat-aging stabilized, low tendency to warp, isotopic properties

ISO Shortname: ISO 16396-PA 6,MD40,GHR,S14-060

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.85	
C Molding shrinkage, transverse	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.85	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.25	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.25	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	5700	2200
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	85	55
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	5.5	40
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	150	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	130	80
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	< 10	12
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	130	N
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	100	85
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Izod notched impact strength	-30 °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	140	65
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	60
C Puncture maximum force	23 °C	N	ISO 6603-2	3030	
C Puncture maximum force	-30 °C	N	ISO 6603-2	728	
C Puncture energy	23 °C	J	ISO 6603-2	20	65
C Puncture energy	-30 °C	J	ISO 6603-2	3	
Ball indentation hardness		N/mm ²	ISO 2039-1	205	85
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	85	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	185	
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	0.6	
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	HB	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	
C Oxygen index	Method A	%	ISO 4589-2	27	
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650	
Burning behavior US-FMVSS302	>=1.0 mm		ISO 3795	passed	



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Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	4.5
C Relative permittivity	1 MHz	-	IEC 60250	4.0
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	255
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	240
C Volume resistivity		Ohm·m	IEC 60093	4E13
C Surface resistivity		Ohm	IEC 60093	7E15
C Electric strength	1 mm	kV/mm	IEC 60243-1	36
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	550
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	6.0
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.9
C Density		kg/m ³	ISO 1183	1440
Bulk density		kg/m ³	ISO 60	700
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	290
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 (Tmin - Tmax)		°C	-	280-300
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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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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Color and Visual Effects

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