

Durethan BKV25H3.0 000000

PA 6, 25 % glass fibers, injection molding, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF25,GHR,S14-080

Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.	
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.3	
C Molding shrinkage, transverse	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.7	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.04	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	8500	5300
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	160	95
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.5	6.0
C Tensile creep modulus	1 h	MPa	ISO 899-1	4500	
C Tensile creep modulus	1000 h	MPa	ISO 899-1	3500	
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	65	85
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	55	50
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	10	15
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 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	8000	4400
Flexural strength	2 mm/min	MPa	ISO 178-A	250	150
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	4.5	6.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	235	125
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	200	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	215	
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	0.3	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.9	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	
Burning behavior US-FMVSS302	>=1.0 mm		ISO 3795	passed	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	5.0	
C Relative permittivity	1 MHz	-	IEC 60250	4.0	
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	420	
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	330	
C Electric strength	1 mm	kV/mm	IEC 60243-1	38	35
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	500	



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Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	7.5
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.2
C Density		kg/m ³	ISO 1183	1320
Bulk density		kg/m ³	ISO 60	700
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 (Tmin - Tmax)		°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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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.

Health and Safety

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Color and Visual Effects

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.

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