Envalior
Imagine the Future

Datasheet
Durethan BKV60EF 000000 DUS097

PA 6, 60% glass fibers, injection molding, improved flowability, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF60,GHR,S10-190

Property		Test Condition	Unit	Standard	guide value [1] d.a.m.	guide value [1] 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	0.6	
	Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.05	
	Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.05	
Mechanical properties (23 °C/50 % r. h.)						
C	Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	19400	12000
C	Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	230	150
C	Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.5	3.5
C	Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	95	95
C	Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	95	95
C	Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	17	24
C	Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	17	
	Izod impact strength	23 °C	kJ/m²	ISO 180-1U	90	90
	Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	95	95
	Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	18	29
	Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	18	
	Flexural modulus	2 mm/min	MPa	ISO 178-A	18000	12500
	Flexural strength	2 mm/min	MPa	ISO 178-A	375	240
	Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3	4
	Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A		250
C	Puncture maximum force	23 °C	N	ISO 6603-2	1500	
C	Puncture maximum force	-30 °C	N	ISO 6603-2	1350	
C	Puncture energy	23 °C	J	ISO 6603-2	4.3	
C	Puncture energy	-30 °C	J	ISO 6603-2	3.8	
Thermal properties						
C	Melting temperature	10 °C/min	°C	ISO 11357-1,-3	221	
C	Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	213	
C	Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	220	
C	Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	186	
	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	210	
C	Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.1	
C	Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.8	

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Property	Test Condition	Unit	Standard	guide value [1] d.a.m.	guide value [1] cond.
Electrical properties (23 °C/50 % r. h.)					
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	3.75	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.18	
C Density		kg/m³	ISO 1183	1700	
Bulk density		kg/m³	ISO 60	750	
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	0.05-0.15	
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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Standard Disclaimer

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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

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Envalior products mentioned in this publication. Before working with these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets (MSDS) and product labels. Consult your Envalior representative or contact the Product Safety and Regulatory Affairs Department. For materials that are not Envalior products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer(s) must be followed.

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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.