

Datasheet

Durethan ECOBKV35H2.0 901510

PA 6, 35% glass fibers, injection molding, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF35 (R),GHR,S14-110

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	0.25	
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	0.05	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.15	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	11000	6500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	185	110
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.3	6.5
C Tensile creep modulus	1 h	MPa	ISO 899-1	6000	
C Tensile creep modulus	1000 h	MPa	ISO 899-1	4900	
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	90	100
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	75	70
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	12	20
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	<10	10
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	80	90
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	70	65
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	15	20
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	<10	10
Flexural modulus	2 mm/min	MPa	ISO 178-A	10500	6200
Flexural strength	2 mm/min	MPa	ISO 178-A	290	180
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.5	6.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	285	150
C Puncture maximum force	23 °C	N	ISO 6603-2	1060	
C Puncture maximum force	-30 °C	N	ISO 6603-2	945	
C Puncture energy	23 °C	J	ISO 6603-2	3.9	
C Puncture energy	-30 °C	J	ISO 6603-2	3.3	
Ball indentation hardness		N/mm ²	ISO 2039-1	230	120
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	205	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	215	
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	150	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	> 200	

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Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.2
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.95
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB
C Oxygen index	Method A	%	ISO 4589-2	23
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	210
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650
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 Comparative tracking index CTI	Solution A	Rating	IEC 60112	475
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	6.5
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.9
C Density		kg/m ³	ISO 1183	1410
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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Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

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