

# Datasheet

## Durethan ECOBKV50H2.0EF 900116

PA 6, 50% glass fibers, injection molding, improved flowability, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF50 (R),GHR,S10-160

Property	Test Condition	Unit	Standard	guide value <sup>1</sup>	
				d.a.m.	cond.
<b>Rheological properties</b>					
C Molding shrinkage, parallel	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.19	
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	0.04	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.08	
<b>Mechanical properties (23 °C/50 % r. h.)</b>					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	16200	10000
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	215	140
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.7	3.5
C Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eU	100	85
C Charpy impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eU	95	85
Izod impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1U	85	80
Izod impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1U	85	80
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1A	17	20
Izod notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1A	15	
Flexural modulus	2 mm/min	MPa	ISO 178-A	15000	9900
Flexural strength	2 mm/min	MPa	ISO 178-A	340	230
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.1	4.4
C Puncture maximum force	23 °C	N	ISO 6603-2	1179	
C Puncture maximum force	-30 °C	N	ISO 6603-2	1000	
C Puncture energy	23 °C	J	ISO 6603-2	4.3	
C Puncture energy	-30 °C	J	ISO 6603-2	3.4	
Ball indentation hardness		N/mm <sup>2</sup>	ISO 2039-1	232	
<b>Thermal properties</b>					
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	210	
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	180	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	214	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.12	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.9	
<b>Electrical properties (23 °C/50 % r. h.)</b>					
C Relative permittivity	100 Hz	-	IEC 60250	4.7	12.9

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Property	Test Condition	Unit	Standard	guide value <sup>1</sup>	
				d.a.m.	cond.
C Relative permittivity	1 MHz	-	IEC 60250	4.2	4.8
C Dissipation factor	100 Hz	10 <sup>-4</sup>	IEC 60250	135	2622
C Dissipation factor	1 MHz	10 <sup>-4</sup>	IEC 60250	170	774
C Volume resistivity		Ohm·m	IEC 62631-3	7E12	4E9
C Electric strength	1 mm	kV/mm	IEC 60243-1	35	34
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	400	
<b>Other properties (23 °C)</b>					
C Density		kg/m <sup>3</sup>	ISO 1183	1570	
Bulk density		kg/m <sup>3</sup>	ISO 60	700	
<b>Processing conditions for test specimens</b>					
C Injection molding-Melt temperature		°C	ISO 294	280	
C Injection molding-Mold temperature		°C	ISO 294	80	
<b>Processing recommendations</b>					
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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