

# Datasheet

## Durethan BKV140H2.0 900051 DUS008

PA 6, 40% glass fibers, injection molding, improved impact strength, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6-I,GF40,GHR,S14-110

Property	Test Condition	Unit	Standard	guide value <sup>1</sup>	
				d.a.m.	cond.
<b>Rheological properties</b>					
C Molding shrinkage, parallel	60x60x2	%	ISO 294-4	0.25	
C Molding shrinkage, transverse	60x60x2	%	ISO 294-4	0.7	
Post- shrinkage, parallel	60x60x2	%	ISO 294-4	0.1	
Post- shrinkage, transverse	60x60x2	%	ISO 294-4	0.15	
<b>Mechanical properties (23 °C/50 % r. h.)</b>					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	12500	7800
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	180	120
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.5	8.5
C Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eU	95	110
C Charpy impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eU	95	90
C Charpy notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eA	20	30
C Charpy notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eA	10	10
Izod impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1U	90	100
Izod impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1U	90	75
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1A	15	30
Izod notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1A	10	10
Flexural modulus	2 mm/min	MPa	ISO 178-A	11250	
Flexural strength	2 mm/min	MPa	ISO 178-A	290	180
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	4.0	6.3
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	290	150
C Puncture maximum force	23 °C	N	ISO 6603-2	1200	1300
C Puncture maximum force	-30 °C	N	ISO 6603-2	930	970
C Puncture energy	23 °C	J	ISO 6603-2	5.5	7.5
C Puncture energy	-30 °C	J	ISO 6603-2	3.5	3.5
Ball indentation hardness		N/mm <sup>2</sup>	ISO 2039-1	230	
<b>Thermal properties</b>					
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	220	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	215	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.9	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.2	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	

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Property	Test Condition	Unit	Standard	guide value <sup>1</sup>	
				d.a.m.	cond.
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	750	
Burning behavior US-FMVSS302			ISO 3795	40	
<b>Electrical properties (23 °C/50 % r. h.)</b>					
C Relative permittivity	100 Hz	-	IEC 60250	4	9
C Relative permittivity	1 MHz	-	IEC 60250	4	4
C Volume resistivity		Ohm·m	IEC 62631-3	1.0E+13	1.0E+9
C Electric strength	1 mm	kV/mm	IEC 60243-1	35	43
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	425	
<b>Other properties (23 °C)</b>					
C Density		kg/m <sup>3</sup>	ISO 1183	1460	
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	290	
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 (T <sub>min</sub> - T <sub>max</sub> )		°C	-	260-290	
Mold temperature		°C	-	80-100	

### 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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