

# Durethan BKV40PH2.0EF 900116 DUS001

PA 6, 40% glass fibers, injection molding, improved flowability, heat-aging stabilized, improved fatigue behavior

ISO Shortname: ISO 16396-PA 6,GF40,GHR,S12-120

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	0.2	
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	0.2	
<b>Mechanical properties (23 °C/50 % r. h.)</b>					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	12500	7500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	205	130
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.5	6
C Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eU	100	100
C Charpy impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eU	85	90
C Charpy notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eA	15	30
C Charpy notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eA	12	12
Izod impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1U	90	90
Izod impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1U	80	90
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1A	17	30
Izod notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1A	13	13
Flexural modulus	2 mm/min	MPa	ISO 178-A	11500	7000
Flexural strength	2 mm/min	MPa	ISO 178-A	315	185
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.8	5.5
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	310	155
C Puncture maximum force	23 °C	N	ISO 6603-2	1033	1291
C Puncture maximum force	-30 °C	N	ISO 6603-2	847	962
C Puncture energy	23 °C	J	ISO 6603-2	2.7	4.1
C Puncture energy	-30 °C	J	ISO 6603-2	1.8	2
<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	206	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	221	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	213	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.2	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.95	
<b>Other properties (23 °C)</b>					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	5.8	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.7	
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	280	



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Property	Test Condition	Unit	Standard	guide value <sup>1</sup> d.a.m. cond.
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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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.

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