

Datasheet

Durethan AKV320ZH2.0 900116

PA 66, 20% glass fibers, blow molding, improved impact strength, heat-aging stabilized

ISO Shortname: ISO 16396-PA 66,GF20,BHR,S14-060

Property	Test Condition	Unit	Standard	guide value ¹	
d.a.m. cond.					
Rheological properties					
Molding shrinkage, parallel	150x105x3; 290 °C / MT 80 °C; 500 bar	%	acc. ISO 294-4	0.67	
Molding shrinkage, transverse	150x105x3; 290 °C / MT 80 °C; 500 bar	%	acc. ISO 294-4	1.04	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.03	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.01	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	6400	3500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	120	75
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	4.9	17.6
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	85	115
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	95	115
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	15	30
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	70	100
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	75	65
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	15	30
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	5400	3000
Flexural strength	2 mm/min	MPa	ISO 178-A	190	105
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5.9	7
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	165	80
C Puncture maximum force	23 °C	N	ISO 6603-2	1000	2100
C Puncture maximum force	-30 °C	N	ISO 6603-2	700	850
C Puncture energy	23 °C	J	ISO 6603-2	4.6	11.2
C Puncture energy	-30 °C	J	ISO 6603-2	3.2	3.7
Ball indentation hardness		N/mm²	ISO 2039-1	175	
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	259	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	221	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	250	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	240	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.3	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.2	

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Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	7.0
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.0
C Density		kg/m ³	ISO 1183	1246
Bulk density		kg/m ³	ISO 60	640
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	290
C Injection molding-Mold temperature		°C	ISO 294	80
moisture content		%	Acc. to Karl Fischer	0.03-0.12
Processing recommendations				
Drying temperature dry air dryer		°C	-	80
Drying time dry air dryer		h	-	2-6
Residual moisture content		%	Acc. to Karl Fischer	0.00-0.06
Melt temperature (Tmin - Tmax)		°C	-	280-300
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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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.

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Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.