

Datasheet

Durethan AKV50 000000

PA 66, 50% glass fibers, injection molding

ISO Shortname: ISO 16396-PA 66,GF50,GR,S14-160

Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.	
Rheological properties					
Molding shrinkage, parallel	150x105x3; 300 °C / MT 80 °C; 400 bar	%	acc. ISO 294-4	0.23	
Molding shrinkage, transverse	150x105x3; 300 °C / MT 80 °C; 400 bar	%	acc. ISO 294-4	1.25	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.02	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.03	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	15700	10700
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	220	170
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.5	4.0
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	95	95
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	100	100
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	19	23
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	15	15
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	14	18
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	11	11
Flexural modulus	2 mm/min	MPa	ISO 178-A	14000	10300
Flexural strength	2 mm/min	MPa	ISO 178-A	370	250
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.0	5.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A		235
Ball indentation hardness		N/mm²	ISO 2039-1	290	160
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	263	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	~250	
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	> 230	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	~4	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	~1.4	
C Density		kg/m³	ISO 1183	1570	
Bulk density		kg/m³	ISO 60	~700	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	300	
C Injection molding-Mold temperature		°C	ISO 294	80	

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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	-	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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