

# Datasheet

## Durethan AKV25FN00 000000

PA 66, 25% glass fibers, injection molding, halogen free flame retardant, heat-aging stabilized

ISO Shortname: ISO 16396-PA 66+PA 6,GF25 FR(30+40),GF2HR,S14-100

Property	Test Condition	Unit	Standard	guide value <sup>1</sup>	
				d.a.m.	cond.
<b>Rheological properties</b>					
C Melt volume-flow rate	270 °C; 2.16 kg	cm <sup>3</sup> /(10 min)	ISO 1133-1	12	
C Molding shrinkage, parallel	60x60x2; 270 °C / WZ 120 °C; 600 bar	%	ISO 294-4	0.3	
C Molding shrinkage, transverse	60x60x2; 270 °C / WZ 120 °C; 600 bar	%	ISO 294-4	0.9	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
<b>Mechanical properties (23 °C/50 % r. h.)</b>					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	9600	5800
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	125	80
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3	6
C Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eU	60	65
C Charpy impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eU	60	60
C Charpy notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1U	55	65
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	9100	5700
Flexural strength	2 mm/min	MPa	ISO 178-A	210	135
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.3	5.8
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A		120
Ball indentation hardness		N/mm <sup>2</sup>	ISO 2039-1	228	
<b>Thermal properties</b>					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	260	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	225	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	225	
C Burning behavior UL 94	1.5 mm	Class	UL 94	V-0	
C Burning behavior UL 94	0.4 mm	Class	UL 94	V-0	
C Burning behavior UL 94-5V	1.5 mm	Class	UL 94	5VA	
C Oxygen index	Method A	%	ISO 4589-2	38	
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	228	
Glow wire test (GWFI)	0.4 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	0.75 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWIT)	0.4 mm	°C	IEC 60695-2-13	775	

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Property	Test Condition	Unit	Standard	guide value <sup>1</sup> <small>d.a.m. cond.</small>
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	775
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	775
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	775
<b>Electrical properties (23 °C/50 % r. h.)</b>				
C Volume resistivity		Ohm·m	IEC 62631-3	7.4 E13
Surface resistivity		Ohm	IEC 60167	1.1 E16
C Electric strength	1 mm	kV/mm	IEC 60243-1	35
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600
Comparative tracking index CTI	Solution A	PLC	UL 746A	0
<b>Other properties (23 °C)</b>				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	4.6
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.5
C Density		kg/m <sup>3</sup>	ISO 1183	1390
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	270
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	0.03-0.07
Melt temperature (Tmin - Tmax)		°C	-	265-285
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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Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

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