

Durethan AKV35H3.0 000000

PA 66, 35% glass fibers, injection molding, heat-aging stabilized

ISO Shortname: ISO 16396-PA 66,GF35,GHR,S14-110

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.37	
C Molding shrinkage, transverse	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.06	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.05	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.09	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	11200	7500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	200	135
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.0	5.0
C Tensile creep modulus	1 h	MPa	ISO 899-1		7000
C Tensile creep modulus	1000 h	MPa	ISO 899-1		5800
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	85	90
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	70	75
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	12	20
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	10	10
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	80	
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	70	
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	12	15
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	10	10
Flexural modulus	2 mm/min	MPa	ISO 178-A	10500	7000
Flexural strength	2 mm/min	MPa	ISO 178-A	300	220
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	4.0	6.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	280	170
C Puncture maximum force	23 °C	N	ISO 6603-2	1030	
C Puncture maximum force	-30 °C	N	ISO 6603-2	900	
C Puncture energy	23 °C	J	ISO 6603-2	3.9	
C Puncture energy	-30 °C	J	ISO 6603-2	2.8	
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	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.2	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.0	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	
C Oxygen index	Method A	%	ISO 4589-2	23	
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	600	
Burning behavior US-FMVSS302	>=1.0 mm		ISO 3795	passed	



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C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	> 230
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	5.0
C Relative permittivity	1 MHz	-	IEC 60250	4.0
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	300
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	270
C Volume resistivity		Ohm·m	IEC 62631-3	1E13
C Surface resistivity		Ohm	IEC 62631-3	1E15
C Electric strength	1 mm	kV/mm	IEC 60243-1	39
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	5.0
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.8
C Density		kg/m ³	ISO 1183	1410
Bulk density		kg/m ³	ISO 60	700
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	290
C Injection molding-Mold temperature		°C	ISO 294	80
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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