

Durethan AKV35 000000

PA 66, 35% glass fibers, injection molding

ISO Shortname: ISO 16396-PA 66,GF35,GR,S14-120

Property	Test Condition	Unit	Standard	guide value	
				d.a.m.	cond.
Rheological properties					
Molding shrinkage, parallel	150x105x3; 300 °C / MT 80 °C; 400 bar	%	acc. ISO 2577	0.32	
Molding shrinkage, transverse	150x105x3; 300 °C / MT 80 °C; 400 bar	%	acc. ISO 2577	1.4	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.03	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.04	
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	90	95
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	75	75
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	15	20
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	10	10
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Izod notched impact strength	-40 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Flexural modulus	2 mm/min	MPa	ISO 178-A	10000	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
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 Oxygen index	Method A	%	ISO 4589-2	23	
Glow wire test (GWI)	2.0 mm	°C	IEC 60695-2-12	600	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	4.0	10
C Relative permittivity	1 MHz	-	IEC 60250	4.0	4.0
C Volume resistivity		Ohm-m	IEC 60093	1E13	1E10



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C Surface resistivity		Ohm	IEC 60093	1E14	1E12
C Electric strength	1 mm	kV/mm	IEC 60243-1	40	35
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	400 M	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	~5	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	~1.8	
C Density		kg/m ³	ISO 1183	1410	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	290	
C Injection molding-Mold temperature		°C	ISO 294	80	

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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Color and Visual Effects

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

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