

Durethan® AKV40H2.0

PA66–GF40

40% Glass Reinforced, Injection Molding, Heat Stabilized

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	0.34 / *	%	ISO 294–4
Molding shrinkage (normal)	0.94 / *	%	ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	13000 / 8800	MPa	ISO 527–1/–2
Stress at break	210 / 145	MPa	ISO 527–1/–2
Strain at break	3 / 5	%	ISO 527–1/–2
Flexural modulus	12000 / 8000	MPa	ISO 178
Flexural strength	320 / 240	MPa	ISO 178
Tensile modulus (200°C)	4560	MPa	ISO 527–1/–2
Charpy impact strength (+23°C)	90 / 100	kJ/m ²	ISO 179/1eU
Charpy impact strength (–30°C)	80 / 90	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	15 / 23	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (–30°C)	10 / 12	kJ/m ²	ISO 179/1eA
THERMAL PROPERTIES			
	DRY / COND		
Melting temperature (10°C/min)	263 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	250 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.2 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.9 / *	E–4/°C	ISO 11359–1/–2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695–11–10
Thickness tested	1.5 / *	mm	IEC 60695–11–10

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.75 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
Oxygen index	26 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	600 / -	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	2 / -	mm	IEC 60695-2-12

ELECTRICAL PROPERTIES

DRY / COND

Relative permittivity (100Hz)	4 / 10	-	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 4.5	-	IEC 62631-2-1
Dissipation factor (100 Hz)	110 / 2350	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	150 / 650	E-4	IEC 62631-2-1
Volume resistivity	>1E13 / 1E12	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric strength	40 / 35	kV/mm	IEC 60243-1
Comparative tracking index	525 / -	V	IEC 60112

OTHER PROPERTIES

DRY / COND

Water absorption	4.5 / *	%	Sim. to ISO 62
Humidity absorption	1.7 / *	%	Sim. to ISO 62
Density	1460 / -	kg/m ³	ISO 1183

MATERIAL SPECIFIC PROPERTIES

DRY / COND

Viscosity number	146 / *	cm ³ /g	ISO 307, 1157, 1628
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PROCESSING RECOMMENDATIONS

VALUE

Drying temperature dry air dryer	80	°C	
Drying time dry air dryer	2-6	h	

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Residual moisture content	0.03–0.12	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	280–300	°C	
Mold temperature	80–120	°C	