

Durethan® AKV40H3.0

PA66–GF40

40% Glass Reinforced, Injection Molding, Heat Stabilized

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<i>RHEOLOGICAL PROPERTIES</i>			
	<i>DRY / COND</i>		
Molding shrinkage (parallel)	0.36 / *	%	ISO 294–4
Molding shrinkage (normal)	0.92 / *	%	ISO 294–4
<i>MECHANICAL PROPERTIES</i>			
	<i>DRY / COND</i>		
Tensile modulus	13000 / 8800	MPa	ISO 527–1/–2
Stress at break	220 / 145	MPa	ISO 527–1/–2
Strain at break	3 / 5	%	ISO 527–1/–2
Flexural modulus	11700 / 8000	MPa	ISO 178
Flexural strength	330 / 240	MPa	ISO 178
Charpy impact strength (+23°C)	100 / 95	kJ/m ²	ISO 179/1eU
Charpy impact strength (–30°C)	90 / 80	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	15 / 20	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (–30°C)	10 / 12	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	17 / 15	kJ/m ²	ISO 180/1A
<i>THERMAL PROPERTIES</i>			
	<i>DRY / COND</i>		
Melting temperature (10°C/min)	262 / *	°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

Property Data

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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
Glow Wire Flammability Index GWFI	600 / –	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	2 / –	mm	IEC 60695-2-12
<i>ELECTRICAL PROPERTIES</i>	<i>DRY / COND</i>		
Relative permittivity (100Hz)	4.9 / –	–	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / –	–	IEC 62631-2-1
Dissipation factor (100 Hz)	270 / –	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	260 / –	E-4	IEC 62631-2-1
Volume resistivity	1E13 / –	Ohm*m	IEC 62631-3-1
Electric strength	40 / –	kV/mm	IEC 60243-1
Comparative tracking index	575 / –	V	IEC 60112
<i>OTHER PROPERTIES</i>	<i>DRY / COND</i>		
Water absorption	4.5 / *	%	Sim. to ISO 62
Humidity absorption	1.7 / *	%	Sim. to ISO 62
Density	1460 / –	kg/m³	ISO 1183
<i>PROCESSING RECOMMENDATIONS</i>	<i>VALUE</i>		
Drying temperature dry air dryer	80	°C	
Drying time dry air dryer	2-6	h	
Residual moisture content	0.03-0.12	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	280-300	°C	
Mold temperature	80-120	°C	