

# Durethan® AKV30

## PA66–GF30

30% Glass Reinforced, Injection Molding

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<b>MECHANICAL PROPERTIES</b>			
	<i>DRY / COND</i>		
Tensile modulus	10600 / 7000	MPa	ISO 527-1/-2
Stress at break	185 / 125	MPa	ISO 527-1/-2
Strain at break	3 / 6	%	ISO 527-1/-2
Flexural modulus	8400 / 5900	MPa	ISO 178
Flexural strength	290 / 200	MPa	ISO 178
Charpy impact strength (+23°C)	90 / 90	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	70 / 70	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 15	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	10 / 10	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength (-40°C)	<10 / <10	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL PROPERTIES</b>			
	<i>DRY / COND</i>		
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)	0.25 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1 / *	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
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
Oxygen index	23 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	600 / -	°C	IEC 60695-2-12

## Property Data

# Durethan® AKV30

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
GWFI (Thickness (1) tested)	2 / –	mm	IEC 60695-2-12
<b><i>ELECTRICAL PROPERTIES</i></b>	<b><i>DRY / COND</i></b>		
Relative permittivity (100Hz)	4 / 10	–	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 4	–	IEC 62631-2-1
Dissipation factor (100 Hz)	90 / 2700	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	180 / 800	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E10	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	600 / –	V	IEC 60112
<b><i>OTHER PROPERTIES</i></b>	<b><i>DRY / COND</i></b>		
Water absorption	5.5 / *	%	Sim. to ISO 62
Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1360 / –	kg/m <sup>3</sup>	ISO 1183
<b><i>MATERIAL SPECIFIC PROPERTIES</i></b>	<b><i>DRY / COND</i></b>		
Viscosity number	146 / *	cm <sup>3</sup> /g	ISO 307, 1157, 1628
<b><i>PROCESSING RECOMMENDATIONS</i></b>	<b><i>VALUE</i></b>		
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	