

# Durethan® AKV50

## PA66—GF50

50% Glass Fiber Reinforced, Injection Molding

Print Date: 2025-09-06

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
<b>MECHANICAL PROPERTIES</b>		<b>DRY / COND</b>	
Tensile modulus	16000 / 11500	MPa	ISO 527-1/-2
Stress at break	235 / 165	MPa	ISO 527-1/-2
Strain at break	2.7 / 3.9	%	ISO 527-1/-2
Flexural modulus	15500 / 11500	MPa	ISO 178
Flexural strength	355 / 275	MPa	ISO 178
Tensile modulus (200°C)	5200	MPa	ISO 527-1/-2
Stress at break (200°C)	75	MPa	ISO 527-1/-2
Strain at break (200°C)	5.9	%	ISO 527-1/-2
Charpy impact strength (+23°C)	95 / 95	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	100 / 100	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	16 / 21	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	14 / 14	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	15 / 20	kJ/m²	ISO 180/1A
<b>THERMAL PROPERTIES</b>		<b>DRY / COND</b>	
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
<b>ELECTRICAL PROPERTIES</b>		<b>DRY / COND</b>	
Relative permittivity (100Hz)	4.5 / 14	—	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 5	—	IEC 62631-2-1
Dissipation factor (100 Hz)	90 / 3200	E-4	IEC 62631-2-1

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Dissipation factor (1 MHz)	150 / 850	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E12	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
Electric strength	40 / 35	kV/mm	IEC 60243-1

OTHER PROPERTIES	DRY / COND		
Water absorption	4 / *	%	Sim. to ISO 62
Humidity absorption	1.2 / *	%	Sim. to ISO 62
Density	1570 / -	kg/m³	ISO 1183

MATERIAL SPECIFIC PROPERTIES	DRY / COND		
Viscosity number	146 / *	cm³/g	ISO 307, 1157, 1628

PROCESSING RECOMMENDATIONS	VALUE		
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	

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