Property Data

Envalior
Imagine the Future

Durethan® AKV50H3.0

PA66–GF50

50% Glass Reinforced, Injection Molding, Heat Stabilized

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	0.37 / *	%	ISO 294–4
Molding shrinkage (normal)	0.93 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	16000 / –	MPa	ISO 527–1/–2
Stress at break	230 / –	MPa	ISO 527–1/–2
Strain at break	2.5 / –	%	ISO 527–1/–2
Flexural modulus	15300 / –	MPa	ISO 178
Flexural strength	360 / –	MPa	ISO 178
Charpy impact strength (+23°C)	100 / –	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	100 / –	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	17 / –	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	15 / –	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	15 / –	kJ/m²	ISO 180/1A
THERMAL PROPERTIES	DRY / COND		
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
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

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Burning Behav. at 0.75 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
ELECTRICAL PROPERTIES	**DRY / COND**		
Relative permittivity (100Hz)	5 / –	–	IEC 62631-2-1
Relative permittivity (1 MHz)	4.4 / –	–	IEC 62631-2-1
Dissipation factor (100 Hz)	250 / –	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	230 / –	E-4	IEC 62631-2-1
Volume resistivity	1E13 / –	Ohm*m	IEC 62631-3-1
Electric strength	38 / –	kV/mm	IEC 60243-1
Comparative tracking index	600 / –	V	IEC 60112
OTHER PROPERTIES	**DRY / COND**		
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	