Property Data

Envalior
Imagine the Future

Durethan® ECOAKV50H2.0

PA66–GF50

50% Glass Fiber Reinforced, Injection Molding, Heat Stabilized, Recycled Content

Print Date: 2025–10–14

Sustainability

Mass balanced
Recycled based

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	0.35 / *	%	ISO 294–4
Molding shrinkage (normal)	0.9 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	16000 / 10200	MPa	ISO 527–1/–2
Stress at break	230 / 160	MPa	ISO 527–1/–2
Strain at break	2.6 / 4	%	ISO 527–1/–2
Flexural modulus	14700 / 10000	MPa	ISO 178
Flexural strength	360 / 250	MPa	ISO 178
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)	15 / 23	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	13 / 15	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	15 / 20	kJ/m²	ISO 180/1A
THERMAL PROPERTIES	DRY / COND		
Melting temperature (10°C/min)	261 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	247 / *	°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

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Coeff. of linear therm. expansion (normal)	0.8 / *	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
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	27 / *	%	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)	4.5 / 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
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
Comparative tracking index	550 / –	V	IEC 60112
OTHER PROPERTIES	**DRY / COND**		
Water absorption	4.5 / *	%	Sim. to ISO 62
Humidity absorption	1.4 / *	%	Sim. to ISO 62
Density	1570 / –	kg/m³	ISO 1183
MATERIAL SPECIFIC PROPERTIES	**DRY / COND**		
Viscosity number	146 / *	cm³/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	
Residual moisture content	0.03–0.12	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	280–300	°C	
Mold temperature	80–120	°C	