

Durethan® BKV40H3.0

PA6—GF40

40% Glass Reinforced, Injection Molding, Heat Stabilized

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	12300 / 7800	MPa	ISO 527-1/-2
Stress at break	205 / 130	MPa	ISO 527-1/-2
Strain at break	3 / 5	%	ISO 527-1/-2
Flexural modulus	11000 / 7300	MPa	ISO 178
Flexural strength	325 / 205	MPa	ISO 178
Charpy impact strength (+23°C)	90 / 95	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	75 / 75	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	18 / 24	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	13 / 11	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	18 / 24	kJ/m²	ISO 180/1A
THERMAL PROPERTIES			
	DRY / COND		
Melting temperature (10°C/min)	222 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	200 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	215 / *	°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)	0.8 / *	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
Oxygen index	24 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	650 / -	°C	IEC 60695-2-12

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GWFI (Thickness (1) tested)	2 / –	mm	IEC 60695–2–12
ELECTRICAL PROPERTIES	DRY / COND		
Relative permittivity (100Hz)	4 / 15	–	IEC 62631–2–1
Relative permittivity (1 MHz)	4 / 5	–	IEC 62631–2–1
Dissipation factor (100 Hz)	70 / 2000	E–4	IEC 62631–2–1
Dissipation factor (1 MHz)	150 / 1200	E–4	IEC 62631–2–1
Volume resistivity	1E13 / 1E10	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	525 / –	V	IEC 60112
OTHER PROPERTIES	DRY / COND		
Water absorption	6 / *	%	Sim. to ISO 62
Humidity absorption	1.8 / *	%	Sim. to ISO 62
Density	1460 / –	kg/m³	ISO 1183
MATERIAL SPECIFIC PROPERTIES	DRY / COND		
Viscosity number	140 / *	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)	270–290	°C	
Mold temperature	80–120	°C	