

Durethan® BKV20FN01

PA6—GF18 FR(40+30+72)

18% Glass Reinforced, Injection Molding, Flame Retardant (halogen free), Heat Stabilized

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	0.3 / *	%	ISO 294-4
Molding shrinkage (normal)	0.6 / *	%	ISO 294-4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	7960 / 4500	MPa	ISO 527-1/-2
Stress at break	105 / 60	MPa	ISO 527-1/-2
Strain at break	3 / 4.9	%	ISO 527-1/-2
Flexural modulus	7200 / 4200	MPa	ISO 178
Flexural strength	170 / 110	MPa	ISO 178
Tensile modulus (200°C)	2140	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	50 / 60	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	<10 / 12	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	<10 / 12	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)	218 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.3 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.9 / *	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
Burning Behav. at 3.0 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.75 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
Oxygen index	34 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	960 / –	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	0.75 / –	mm	IEC 60695-2-12
Glow Wire Flammability Index GWFI	960 / –	°C	IEC 60695-2-12
GWFI (Thickness (2) tested)	1.5 / –	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	750 / –	°C	IEC 60695-2-13
GWIT (Thickness (1) tested)	0.75 / –	mm	IEC 60695-2-13
Glow Wire Ignition Temperature GWIT	750 / –	°C	IEC 60695-2-13
GWIT (Thickness (2) tested)	1.5 / –	mm	IEC 60695-2-13

ELECTRICAL PROPERTIES	DRY / COND		
Relative permittivity (100Hz)	4 / 9	–	IEC 62631-2-1
Relative permittivity (1 MHz)	3.5 / 4	–	IEC 62631-2-1
Dissipation factor (100 Hz)	165 / 1250	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	170 / 775	E-4	IEC 62631-2-1
Volume resistivity	>1E13 / 1.2E11	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 3.7E14	Ohm	IEC 62631-3-2
Electric strength	36 / 35	kV/mm	IEC 60243-1
Comparative tracking index	600 / –	V	IEC 60112

OTHER PROPERTIES	DRY / COND		
Water absorption	5.3 / *	%	Sim. to ISO 62
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1340 / –	kg/m³	ISO 1183

PROCESSING RECOMMENDATIONS	VALUE
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Drying temperature dry air dryer	80	°C	
Drying time dry air dryer	2–6	h	
Residual moisture content	0.03–0.07	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	250–270	°C	
Mold temperature	80–100	°C	