

Durethan® B30SFN31

PA6 FR(30)

Injection Molding, Unreinforced, Flame Retardant (halogen free), Heat Stabilized

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	1 / *	%	ISO 294-4
Molding shrinkage (normal)	0.9 / *	%	ISO 294-4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	3500 / 1200	MPa	ISO 527-1/-2
Nominal strain at break	4.9 / –	%	ISO 527-1/-2
Yield stress	80 / 45	MPa	ISO 527-1/-2
Yield strain	3.9 / 25	%	ISO 527-1/-2
Flexural modulus	3500 / 1300	MPa	ISO 178
Flexural strength	120 / 45	MPa	ISO 178
Charpy impact strength (+23°C)	70 / N	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	65 / 80	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	<10 / 12	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	<10 / <10	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	<10 / 11	kJ/m²	ISO 180/1A
THERMAL PROPERTIES			
	DRY / COND		
Temp. of deflection under load (1.80 MPa)	75 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	185 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.8 / *	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

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Burning Behav. at 3.0 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.4 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	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	36 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	960 / -	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	0.4 / -	mm	IEC 60695-2-12
Glow Wire Flammability Index GWFI	960 / -	°C	IEC 60695-2-12
GWFI (Thickness (2) tested)	0.75 / -	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	960 / -	°C	IEC 60695-2-13
GWIT (Thickness (1) tested)	0.4 / -	mm	IEC 60695-2-13
Glow Wire Ignition Temperature GWIT	960 / -	°C	IEC 60695-2-13
GWIT (Thickness (2) tested)	0.75 / -	mm	IEC 60695-2-13
ELECTRICAL PROPERTIES		DRY / COND	
Relative permittivity (100Hz)	3.6 / -	-	IEC 62631-2-1
Relative permittivity (1 MHz)	3.5 / -	-	IEC 62631-2-1
Dissipation factor (100 Hz)	140 / -	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	195 / -	E-4	IEC 62631-2-1
Volume resistivity	>1E13 / -	Ohm*m	IEC 62631-3-1
Electric strength	23 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	V	IEC 60112
OTHER PROPERTIES		DRY / COND	
Water absorption	8.5 / *	%	Sim. to ISO 62
Humidity absorption	2.7 / *	%	Sim. to ISO 62
Density	1170 / -	kg/m³	ISO 1183

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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	0.03–0.07	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	255–270	°C	
Mold temperature	80–100	°C	