

Durethan® B31SK

PA6

Injection Molding, Unreinforced

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	3500 / 1100	MPa	ISO 527-1/-2
Nominal strain at break	10 / >50	%	ISO 527-1/-2
Yield stress	85 / 50	MPa	ISO 527-1/-2
Yield strain	4 / 20	%	ISO 527-1/-2
Flexural modulus	3000 / 900	MPa	ISO 178
Flexural strength	120 / 40	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	<10 / 25	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 / 25	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)	60 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	170 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.7 / *	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-2 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
Burning Behav. at 3.0 mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.4 mm nom. thickn.	V-2 / *	class	IEC 60695-11-10

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Thickness tested	0.4 / *	mm	IEC 60695-11-10
Oxygen index	25 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	750 / –	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	2 / –	mm	IEC 60695-2-12

ELECTRICAL PROPERTIES	DRY / COND		
Relative permittivity (100Hz)	4 / 13	–	IEC 62631-2-1
Relative permittivity (1 MHz)	3.5 / 4	–	IEC 62631-2-1
Dissipation factor (100 Hz)	60 / 1900	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	200 / 1000	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E10	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	30 / 30	kV/mm	IEC 60243-1
Comparative tracking index	600 / –	V	IEC 60112

OTHER PROPERTIES	DRY / COND		
Water absorption	10 / *	%	Sim. to ISO 62
Humidity absorption	3 / *	%	Sim. to ISO 62
Density	1140 / –	kg/m³	ISO 1183

MATERIAL SPECIFIC PROPERTIES	DRY / COND		
Viscosity number	138 / *	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)	260-280	°C	

Property Data

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Mold temperature	80–100	°C	