

Durethan® B31F

PA6

Film Extrusion, Unreinforced, Extrusion, Food Contact Quality, Low Viscosity, no additives

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	2800 / 800	MPa	ISO 527-1/-2
Nominal strain at break	20 / >50	%	ISO 527-1/-2
Yield stress	75 / 35	MPa	ISO 527-1/-2
Yield strain	4 / 25	%	ISO 527-1/-2
Flexural modulus	2600 / 700	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	N / 55	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	5 / 50	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	5 / -	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	7 / 50	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)	50 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	150 / *	°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)	0.8 / *	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
Oxygen index	24 / *	%	ISO 4589-1/-2
ELECTRICAL PROPERTIES			
	DRY / COND		
Relative permittivity (100Hz)	3.9 / 18	-	IEC 62631-2-1



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Relative permittivity (1 MHz)	3.5 / 4	–	IEC 62631–2–1
Volume resistivity	1E12 / 1E10	Ohm*m	IEC 62631–3–1
Surface resistivity	* / 1E13	Ohm	IEC 62631–3–2
Electric strength	30 / 35	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	155 / *	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	
Mold temperature	80–100	°C	

