

# Durethan<sup>®</sup> BC30

## PA6-I

Injection Molding, Unreinforced, Improved Impact

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<b>RHEOLOGICAL PROPERTIES</b>			
	<i>DRY / COND</i>		
Molding shrinkage (parallel)	1.65 / *	%	ISO 294-4
Molding shrinkage (normal)	1.75 / *	%	ISO 294-4
<b>MECHANICAL PROPERTIES</b>			
	<i>DRY / COND</i>		
Tensile modulus	2800 / 1200	MPa	ISO 527-1/-2
Nominal strain at break	- / >50	%	ISO 527-1/-2
Yield stress	65 / 40	MPa	ISO 527-1/-2
Yield strain	4 / 20	%	ISO 527-1/-2
Flexural modulus	2400 / 800	MPa	ISO 178
Flexural strength	90 / 30	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 50	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<10 / <10	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength (+23°C)	<10 / 50	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL PROPERTIES</b>			
	<i>DRY / COND</i>		
Melting temperature (10°C/min)	222 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	55 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	145 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	1 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.35 / *	E-4/°C	ISO 11359-1/-2
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10

## Property Data

# Durethan® BC30

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.75 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
Oxygen index	22 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	800 / –	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	2 / –	mm	IEC 60695-2-12

### *ELECTRICAL PROPERTIES*

#### *DRY / COND*

Relative permittivity (100Hz)	3.7 / 8.5	–	IEC 62631-2-1
Relative permittivity (1 MHz)	3.3 / 3.8	–	IEC 62631-2-1
Dissipation factor (100 Hz)	110 / 1650	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	190 / 660	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E11	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	35 / 35	kV/mm	IEC 60243-1
Comparative tracking index	600 / –	V	IEC 60112

### *OTHER PROPERTIES*

#### *DRY / COND*

Water absorption	9 / *	%	Sim. to ISO 62
Humidity absorption	2.7 / *	%	Sim. to ISO 62
Density	1100 / –	kg/m <sup>3</sup>	ISO 1183

### *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	80-90	°C	