

# Durethan<sup>®</sup> A30SH3.0 SR2

## PA66

General purpose, Unreinforced

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<b>MECHANICAL PROPERTIES</b>			
	<i>DRY / COND</i>		
Tensile modulus	3600 / 1700	MPa	ISO 527-1/-2
Nominal strain at break	5 / >50	%	ISO 527-1/-2
Yield stress	95 / 60	MPa	ISO 527-1/-2
Yield strain	4.5 / 18	%	ISO 527-1/-2
Flexural modulus	3200 / 1400	MPa	ISO 178
Flexural strength	135 / 60	MPa	ISO 178
Charpy impact strength (+23°C)	150 / N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	100 / 100	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<10 / 12	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 / <10	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL PROPERTIES</b>			
	<i>DRY / COND</i>		
Melting temperature (10°C/min)	263 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	75 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	230 / *	°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)	0.8 / *	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

## Property Data

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Thickness tested	0.4 / *	mm	IEC 60695-11-10
Burning Behav. at 0.75 mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
<b><i>ELECTRICAL PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Relative permittivity (100Hz)	3.8 / 4.4	–	IEC 62631-2-1
Relative permittivity (1 MHz)	3.4 / 4.1	–	IEC 62631-2-1
Dissipation factor (100 Hz)	70 / 1100	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	170 / 900	E-4	IEC 62631-2-1
Electric strength	30 / 30	kV/mm	IEC 60243-1
<b><i>OTHER PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Water absorption	8.5 / *	%	Sim. to ISO 62
Humidity absorption	2.8 / *	%	Sim. to ISO 62
Density	1140 / –	kg/m <sup>3</sup>	ISO 1183
<b><i>MATERIAL SPECIFIC PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Viscosity number	144 / *	cm <sup>3</sup> /g	ISO 307, 1157, 1628
<b><i>PROCESSING RECOMMENDATIONS</i></b>		<b><i>VALUE</i></b>	
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)	275-295	°C	
Mold temperature	80-100	°C	