

Datasheet

Durethan A30SH3.0 000000 SR2

PA 66, non-reinforced, injection molding, heat-aging stabilized

ISO Shortname: ISO 16396-PA 66,,GHR,S14-040

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
Molding shrinkage, parallel	150x105x3; 280 °C / MT 80 °C; 400 bar	%	acc. ISO 294-4	0.75	
Molding shrinkage, transverse	150x105x3; 280 °C / MT 80 °C; 400 bar	%	acc. ISO 294-4	1.65	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.1	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.15	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	3600	1700
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	95	60
C Yield strain	50 mm/min	%	ISO 527-1,-2	4.5	18
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	5.0	> 50
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	150	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	100	100
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	< 10	12
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	< 10	< 10
Charpy notched impact strength	-40 °C	kJ/m ²	ISO 179-1eA	< 10	< 10
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Flexural modulus	2 mm/min	MPa	ISO 178-A	3200	1400
Flexural strength	2 mm/min	MPa	ISO 178-A	135	60
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	6.0	8.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	110	45
Ball indentation hardness		N/mm ²	ISO 2039-1	140	70
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	263	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	75	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	230	
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	50	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	> 230	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.8	
Burning behavior UL 94 (1.6 mm)	1.6 mm	Class	UL 94	V-2	
Burning behavior UL 94	3.2 mm	Class	UL 94	V-2	
Burning behavior US-FMVSS302	>=1.0 mm		ISO 3795	passed	

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Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	3.8	4.4
C Relative permittivity	1 MHz	-	IEC 60250	3.4	4.1
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	70	1100
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	170	900
C Electric strength	1 mm	kV/mm	IEC 60243-1	30	30
Comparative tracking index CTI	Solution A	PLC	UL 746A	0	
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	550	(450) M
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	8,5	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2,8	
C Density		kg/m ³	ISO 1183	1140	
Bulk density		kg/m ³	ISO 60	700	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	280	
C Injection molding-Mold temperature		°C	ISO 294	80	
Processing recommendations					
Drying temperature dry air dryer		°C	-	80	
Drying time dry air dryer		h	-	2-6	
Residual moisture content		%	Acc. to Karl Fischer	0.03-0.12	
Melt temperature (Tmin - Tmax)		°C	-	275-295	
Mold temperature		°C	-	80-100	

Notes

1 Typical properties: these are not to be construed as specifications

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

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