

Durethan A30SFN31 000000

PA 66, non-reinforced, injection molding, halogen free flame retardant, improved flowability

ISO Shortname: ISO 16396-PA 66,FR(30),GF2HR,S12-040

Property	Test Condition	Unit	Standard	guide value	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.1	
C Molding shrinkage, transverse	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.1	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	3800	1500
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	85	50
C Yield strain	50 mm/min	%	ISO 527-1,-2	4.1	>20
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	60	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	50	80
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	55	N
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	55	60
Izod notched impact strength		kJ/m ²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	3700	1600
Flexural strength	2 mm/min	MPa	ISO 178-A	125	55
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5.8	7,8
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	120	40
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	265	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	80	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	212	
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	0.8	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7	
C Burning behavior UL 94	1.5 mm	Class	UL 94	V-0	
C Burning behavior UL 94	0.4 mm	Class	UL 94	V-0	
C Oxygen index	Method A	%	ISO 4589-2	34	
Glow wire test (GWFI)	0.4 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	0.75 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWIT)	0.4 mm	°C	IEC 60695-2-13	775	
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	775	



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Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	775	
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	775	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	4.0	8.0
C Relative permittivity	1 MHz	-	IEC 60250	4.0	4.0
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	120	2000
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	190	550
C Volume resistivity		Ohm·m	IEC 60093	1E12	1E11
C Surface resistivity		Ohm	IEC 60093	1E15	1E13
C Electric strength	1 mm	kV/mm	IEC 60243-1	30	25
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	7.9	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.6	
C Density		kg/m ³	ISO 1183	1169	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	260	
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	0.03-0.07	
Melt temperature (Tmin - Tmax)		°C	-	260-270	
Mold temperature		°C	-	80-100	

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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Typical Properties

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

Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

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Color and Visual Effects

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LANXESS Corporation | Pittsburgh, PA 15275

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