

Data sheet

Durethan AM440H3.0 000000

PA 66, 40% mineral, injection molding, heat-aging stabilized, low tendency to warp

ISO Shortname: ISO 16396-PA 66,MD40,GHR,S14-060

Property	Test Condition	Unit	Standard	guide value	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.3	
C Molding shrinkage, transverse	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	1.1	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.4	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.4	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	6100	2700
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	85	38
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.5	10
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	40	65
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	45	35
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	<10	<10
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	35	45
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	35	35
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	<10	<10
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	5800	2700
Flexural strength	2 mm/min	MPa	ISO 178-A	140	70
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.5	7.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	140	60
C Puncture maximum force	23 °C	N	ISO 6603-2	610	640
C Puncture maximum force	-30 °C	N	ISO 6603-2	610	610
C Puncture energy	23 °C	J	ISO 6603-2	2.2	2.9
C Puncture energy	-30 °C	J	ISO 6603-2	2.2	2
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	110	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	230	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	245	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10-4/K	ISO 11359-1,-2	0.6	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10-4/K	ISO 11359-1,-2	0.8	
Electrical properties (23 °C/50 % r. h.)					
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	4.5	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.7	
C Density		kg/m³	ISO 1183	1490	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	290	
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	-	280-300	
Mold temperature		°C	-	80-120	

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.

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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

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.

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