

Datasheet

Durethan B40FD 000000

PA 6, non-reinforced, extrusion, film grade, high viscosity, with reduced crystallisation speed, suitable for food-contact

ISO Shortname: ISO 16396-PA 6,,F,S22-030

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Melt volume-flow rate	235 °C; 2.16 kg	cm ³ /(10 min)	ISO 1133-1	3.0	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2800	800
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	75	35
C Yield strain	50 mm/min	%	ISO 527-1,-2	4.0	25
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	20	>50
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	N	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	N	N
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	5.0	50
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	5.0	5.0
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	7.0	7.5
Flexural modulus	2 mm/min	MPa	ISO 178-A	2600	700
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5.0	8.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	90	20
Ball indentation hardness		N/mm ²	ISO 2039-1	130	40
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	222	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	50	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	150	
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	40	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	200	
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	0.8	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	
C Oxygen index	Method A	%	ISO 4589-2	24	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	~10	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	~3	
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	260	

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Property	Test Condition	Unit	Standard	guide value ¹
C Injection molding-Mold temperature		°C	ISO 294	d.a.m. cond. 40

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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Standard Disclaimer

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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.

Health and Safety

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Envalior products mentioned in this publication. Before working with these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets (MSDS) and product labels. Consult your Envalior representative or contact the Product Safety and Regulatory Affairs Department. For materials that are not Envalior products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer(s) must be followed.

Regulatory Compliance

Some of the end uses of the products described in this brochure must comply with applicable regulations, such as the FDA, NSF, USDA and CPSC. If you have any questions on the regulatory status of any Envalior engineering thermoplastic, consult your Envalior representative or contact the Regulatory Affairs Manager.

Color and Visual Effects

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