

Datasheet

Durethan B30SF 000000

PA 6, non-reinforced, injection molding, suitable for food-contact

ISO Shortname: ISO 16396-PA 6,,GR,S14-030

Property	Test Condition	Unit	Standard	guide value ¹	
				dry as molded	conditioned
Mechanical properties (23 °C/50 % r. h.)					
Tensile modulus	1 mm/min	lb/in ²	ASTM D 638	464000	159000
Tensile stress at yield	-	lb/in ²	ASTM D 638	11600	5800
Tensile elongation at yield	-	%	ASTM D 638	4.0	20
Tensile elongation at break	-	%	ASTM D 638	35	> 50
Tensile stress at break	-	lb/in ²	ASTM D 638	7250	8700
Izod notched impact strength	73 °F, 0.125 in	ft-lb/in	ASTM D 256	1.1	14
Flexural modulus	-	lb/in ²	ASTM D 790	392000	102000
Flexural stress at 5 % strain	-	lb/in ²	ASTM D 790	16700	5080
Thermal properties					
Deflection temperature under load, Unannealed	66 psi; 0.157 in	°F	ASTM D 648	356	
Deflection temperature under load, Unannealed	264 psi; 0.157 in	°F	ASTM D 648	140	
UL94 Flame Class	Thickness tested: 1.5 mm	Class	UL 94	V-2	
UL94 Flame Class	Thickness tested: 3.0 mm	Class	UL 94	V-2	
Relative temperature index, mechanical with impact	Thickness tested: 1.5 mm	°C	UL 746B	65	
Relative temperature index, mechanical without impact	Thickness tested: 1.5 mm	°C	UL 746B	75	
Relative temperature index, electrical	Thickness tested: 1.5 mm	°C	UL 746B	105	
Electrical properties (23 °C/50 % r. h.)					
Dissipation factor	50 Hz	-	IEC 60250	0.05	2.3
Dissipation factor	1 MHz	-	IEC 60250	0.07	0.4
Volume resistivity		Ohm-m	IEC 60093	1E13	1E10
Surface resistivity		Ohm	IEC 60093	1E13	1E12
Dielectric strength	0.118 in	V/mil	IEC 60243-1	762	889
Dielectric constant, Tinfoil electrodes	50 Hz	-	IEC 60250	3.8	20
Dielectric constant, Tinfoil electrodes	1 MHz	-	IEC 60250	3.4	4.6
Comparative tracking index CTI		V	ASTM D 3638		600
Other properties (23 °C)					
Density		lb/in ³	ASTM D 792	0.041	
Specific gravity		-	ASTM D 792	1.14	

Notes

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

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Disclaimer

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Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the coloring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

Conditioning

Conditioning in accordance with ISO 1110 (70 °C; 62 % r.h.)

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