Durethan® BC304 000000

PA6-I — Envalior

Product Texts

Injection Molding, Unreinforced, Improved Impact

ISO 1043 PA6-I

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**1.3 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.4 / ***	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**1800 / 800**	MPa	ISO 527
[C] Yield stress	**45 / 35**	MPa	ISO 527
[C] Yield strain	**4.5 / 30**	%	ISO 527
[C] Nominal strain at break	**>50 / >50**	%	ISO 527
[C] Charpy impact strength, +23°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**85 / 120**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**20 / 20**	kJ/m²	ISO 179/1eA
[C] Puncture - maximum force, +23°C	**4100 / -**	N	ISO 6603-2
[C] Puncture - maximum force, -30°C	**4800 / -**	N	ISO 6603-2
[C] Puncture energy, +23°C	**55 / -**	J	ISO 6603-2
[C] Puncture energy, -30°C	**60 / -**	J	ISO 6603-2

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**222 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**50 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**90 / ***	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**150 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**160 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
[C] Oxygen index	**21 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**3.3 / 11**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3 / 3.5**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**70 / 1750**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**150 / 900**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1E13 / 1E10**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / 1E14**	Ohm	IEC 62631-3-2
[C] Electric strength	**35 / 35**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**7.5 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**2.2 / ***	%	Sim. to ISO 62
[C] Density	**1060 / -**	kg/m³	ISO 1183

[C]: CAMPUS

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Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	**270**	°C	ISO 294
Injection Molding, mold temperature	**80**	°C	ISO 294

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**80**	°C	-
Pre-drying - Time	**2 - 6**	h	-
Processing humidity	**≤0.12**	%	-
Melt temperature	**260 - 280**	°C	-
Mold temperature	**80 - 90**	°C	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets

Additives
Release agent

Special Characteristics
High impact or impact modified

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

Injection molding
PREPROCESSING
Residual moisture content: 0.03 - 0.12%
Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

PROCESSING
Melt temperature (Tmin - Tmax): 260 - 280 °C

Mold temperature: 80 - 90 °C

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