Durethan® BC304H3.0 000000

PA6-I — Envalior

Product Texts

Injection Molding, Unreinforced, Heat Stabilized, Improved Impact

ISO 1043 PA6-I

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	**1.1 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.4 / ***	%	ISO 294-4, 2577

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
Flexural modulus, 23°C	**1600 / 700**	MPa	ISO 178
[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
Izod notched impact strength, +23°C	**70 / 100**	kJ/m²	ISO 180/1A
Izod notched impact strength	**30 / 17**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
[C] Puncture energy, +23°C	**55 / -**	J	ISO 6603-2
[C] Puncture energy, -30°C	**60 / -**	J	ISO 6603-2
Ball indentation hardness	**80 / 35**	MPa	ISO 2039-1
ASTM Data			
Tensile Modulus	**1800 / 799.8**	MPa	ASTM D 638
Tensile Strength at Yield	**45 / 35**	MPa	ASTM D 638
Elongation at Yield	**4 / -**	%	ASTM D 638
Elongation at Break	**200 / 200**	%	ASTM D 638
Flexural Modulus	**1600 / 751.5**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**646 / 918**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**646 / 646**	J/m	ASTM D 256
Temperature	**-40**	°C	-

[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
ASTM Data			
DTUL @ 66 psi	**90**	°C	ASTM D 648
DTUL @ 264 psi	**50**	°C	ASTM D 648

[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
Bulk density	**600**	kg/m³	-
Density	**1060**	kg/m³	ASTM D 792

[C]: CAMPUS

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, Other Extrusion

Delivery form
Pellets

Additives
Release agent

Special Characteristics
High impact or impact modified, Heat stabilized or stable to heat

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