

Durethan BC304H3.0 000000
PA6-I

LANXESS Deutschland GmbH

PA 6, non-reinforced, injection molding, improved impact strength, heat-aging stabilized

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Density, 73 °F	1060	kg/m³	ASTM D 792
Mechanical Properties			
	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	1800 / 800	MPa	ISO 527
Yield stress	45 / 35	MPa	ISO 527
Yield strain	4.5 / 30	%	ISO 527
Nominal strain at break	>50 / >50	%	ISO 527
Charpy impact strength (+23 °C)	no break / no break	kJ/m²	ISO 179/1eU
Charpy impact strength, -30 °C	no break / no break	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23 °C)	85 / 120	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30 °C	20 / 20	kJ/m²	ISO 179/1eA
Puncture energy, +23 °C	55 / -	J	ISO 6603-2
Puncture energy, -30 °C	60 / -	J	ISO 6603-2
Flexural modulus (23 °C)	1600 / 700	MPa	ISO 178
Izod Impact notched, 23 °C	70 / 100	kJ/m²	ISO 180/1A
Izod Impact notched	30 / 17	kJ/m²	ISO 180/1A
Temperature	-30	°C	-
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	-
Thermal Properties			
	dry / cond	Unit	Test Standard
ISO Data			
Melting temperature (10 °C/min)	222 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	50 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	90 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	150 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	160 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB / *	class	UL 94
Thickness tested	1.5 / *	mm	-
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
Electrical Properties			
	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.3 / 11	-	IEC 62631-2-1
Relative permittivity, 1MHz	3 / 3.5	-	IEC 62631-2-1
Dissipation factor, 100Hz	70 / 1750	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	150 / 900	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E10	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	35 / 35	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112
Other Properties			
	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	7.5 / *	%	Sim. to ISO 62
Humidity absorption	2.2 / *	%	Sim. to ISO 62

Density	1060 / -	kg/m ³	ISO 1183
Bulk density	600	kg/m ³	-

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

Characteristics

Processing

Injection Molding, Other Extrusion

Special Characteristics

Impact modified, Heat aging stabilized

Delivery form

Pellets

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

Disclaimer

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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