

Durethan[®] BC304

PA6-I

Injection Molding, Unreinforced, Improved Impact

Print Date: 2024-08-24

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	1.3 / *	%	ISO 294-4
Molding shrinkage (normal)	1.4 / *	%	ISO 294-4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	1800 / 800	MPa	ISO 527-1/-2
Nominal strain at break	>50 / >50	%	ISO 527-1/-2
Yield stress	45 / 35	MPa	ISO 527-1/-2
Yield strain	4.5 / 30	%	ISO 527-1/-2
Flexural modulus	1600 / 700	MPa	ISO 178
Flexural strength	60 / 30	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	85 / 120	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	20 / 20	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	70 / 100	kJ/m ²	ISO 180/1A
THERMAL PROPERTIES			
	DRY / COND		
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)	1.5 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.6 / *	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10

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Property Data

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Thickness tested	1.5 / *	mm	IEC 60695-11-10
Oxygen index	21 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	650 / -	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	2 / -	mm	IEC 60695-2-12

ELECTRICAL PROPERTIES

DRY / COND

Relative permittivity (100Hz)	3.3 / 11	-	IEC 62631-2-1
Relative permittivity (1 MHz)	3 / 3.5	-	IEC 62631-2-1
Dissipation factor (100 Hz)	70 / 1750	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	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 / -	V	IEC 60112

OTHER PROPERTIES

DRY / COND

Water absorption	7.5 / *	%	Sim. to ISO 62
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1060 / -	kg/m³	ISO 1183

PROCESSING RECOMMENDATIONS

VALUE

Drying temperature dry air dryer	80	°C	
Drying time dry air dryer	2-6	h	
Residual moisture content	0.03-0.12	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	260-280	°C	
Mold temperature	80-90	°C	

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