Property Data

Envalior
Imagine the Future

Durethan® BTC77ZH3.0EF

PA6–MX77

77% Mineral Reinforced, Injection Molding, Heat Stabilized, Thermal conductive material

Print Date: 2025–08–21

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	0.7 / *	%	ISO 294–4
Molding shrinkage (normal)	0.6 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	13600 / 5000	MPa	ISO 527–1/–2
Stress at break	95 / 60	MPa	ISO 527–1/–2
Strain at break	2.8 / 5	%	ISO 527–1/–2
Flexural modulus	14000 / 6000	MPa	ISO 178
Flexural strength	180 / 110	MPa	ISO 178
Tensile modulus (200°C)	972	MPa	ISO 527–1/–2
Charpy impact strength (+23°C)	35 / 50	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	20 / 20	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	<10 / <10	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	<10 / <10	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	<10 / <10	kJ/m²	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)	142 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	191 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.4 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.4 / *	E–4/°C	ISO 11359–1/–2
Thermal conductivity in plane	1.8	W/(m K)	ASTM E1461

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Thermal conductivity through plane	1.7	W/(m K)	ASTM E1461
Burning Behav. at 0.75 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
ELECTRICAL PROPERTIES	**DRY / COND**		
Volume resistivity	>1E13 / -	Ohm*m	IEC 62631-3-1
Electric strength	31 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	V	IEC 60112
OTHER PROPERTIES	**DRY / COND**		
Density	2510 / -	kg/m³	ISO 1183
PROCESSING RECOMMENDATIONS	**VALUE**		
Drying temperature dry air dryer	80	°C	
Drying time dry air dryer	2-6	h	
Melt temperature (Tmin - Tmax)	280-300	°C	
Mold temperature	80-120	°C	