Property Data

Envalior
Imagine the Future

ForTii® Ace MX54B

PPA–GF60

60% Glass Fiber Reinforced, PA4T, Heat Stabilized, for Structural Parts

Print Date: 2026–05–23

ForTii® Ace MX54B is a high Tg PPA combining good toughness at low temperatures and chemical resistance. It is designed to have a dimensional stability close to aluminum. It has a high mechanical performance over a broad temperature range, from –35°C to above 150°C, both in dry as well as conditioned environment.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	0.4 / *	%	ISO 294–4
Molding shrinkage (normal)	0.8 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	23000 / 23800	MPa	ISO 527–1/–2
Tensile modulus (–40°C)	25000 / 24000	MPa	ISO 527–1/–2
Tensile modulus (40°C)	22500 / 23500	MPa	ISO 527–1/–2
Tensile modulus (80°C)	22000 / 17800	MPa	ISO 527–1/–2
Tensile modulus (100°C)	21500 / 10900	MPa	ISO 527–1/–2
Tensile modulus (120°C)	20500 / 9500	MPa	ISO 527–1/–2
Tensile modulus (150°C)	12500	MPa	ISO 527–1/–2
Tensile modulus (160°C)	9800	MPa	ISO 527–1/–2
Tensile modulus (180°C)	8100	MPa	ISO 527–1/–2
Tensile modulus (200°C)	7400	MPa	ISO 527–1/–2
Stress at break	270 / 250	MPa	ISO 527–1/–2
Stress at break (–40°C)	330 / 320	MPa	ISO 527–1/–2
Stress at break (40°C)	260 / 230	MPa	ISO 527–1/–2
Stress at break (80°C)	230 / 140	MPa	ISO 527–1/–2
Stress at break (100°C)	210 / 100	MPa	ISO 527–1/–2
Stress at break (120°C)	180 / 80	MPa	ISO 527–1/–2
Stress at break (150°C)	115	MPa	ISO 527–1/–2

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Stress at break (160°C)	95	MPa	ISO 527–1/–2
Stress at break (180°C)	75	MPa	ISO 527–1/–2
Stress at break (200°C)	65	MPa	ISO 527–1/–2
Strain at break	1.8 / 1.85	%	ISO 527–1/–2
Strain at break (–40°C)	1.8 / 1.75	%	ISO 527–1/–2
Strain at break (40°C)	1.75 / 1.65	%	ISO 527–1/–2
Strain at break (80°C)	1.8 / 2.6	%	ISO 527–1/–2
Strain at break (100°C)	1.8 / 3	%	ISO 527–1/–2
Strain at break (120°C)	1.9 / 3.3	%	ISO 527–1/–2
Strain at break (150°C)	3.5	%	ISO 527–1/–2
Strain at break (160°C)	4	%	ISO 527–1/–2
Strain at break (180°C)	4	%	ISO 527–1/–2
Strain at break (200°C)	4	%	ISO 527–1/–2
Flexural modulus	23500 / 24000	MPa	ISO 178
Flexural strength	420 / 390	MPa	ISO 178
Flexural modulus (120°C)	20000	MPa	ISO 178
Flexural modulus (160°C)	12000	MPa	ISO 178
Flexural modulus (180°C)	9000	MPa	ISO 178
Flexural modulus (200°C)	8200	MPa	ISO 178
Charpy impact strength (+23°C)	90 / 75	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	75 / 75	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 10	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	12 / 11	kJ/m²	ISO 179/1eA

THERMAL PROPERTIES	DRY / COND		
Melting temperature (10°C/min)	330 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	307 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.13 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.41 / *	E–4/°C	ISO 11359–1/–2

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Thermal Index 5000 hrs	176	°C	IEC 60216/ISO 527–1/–2
ELECTRICAL PROPERTIES	**DRY / COND**		
Comparative tracking index	425 / –	V	IEC 60112
OTHER PROPERTIES	**DRY / COND**		
Humidity absorption	1.2 / *	%	Sim. to ISO 62
Density	1790 / –	kg/m³	ISO 1183