Property Data

Envalior
Imagine the Future

ForTii® MX15HR

PPA–GF35

35% Glass Fiber Reinforced, PA4T, Electro–friendly, for Automotive applications

Print Date: 2026–07–28

ForTii® MX15HR exhibits enhanced hydrolytic stability towards aggressive coolants (water/glycol, 135°C) that are used in engine's thermal management systems. It has excellent mechanical performance and weld–line resistance.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	**DRY / COND**		
Molding shrinkage (parallel)	0.35 / *	%	ISO 294–4
Molding shrinkage (normal)	1.05 / *	%	ISO 294–4
MECHANICAL PROPERTIES	**DRY / COND**		
Tensile modulus	12500 / 12900	MPa	ISO 527–1/–2
Tensile modulus (–40°C)	12500 / –	MPa	ISO 527–1/–2
Tensile modulus (40°C)	12200 / –	MPa	ISO 527–1/–2
Tensile modulus (80°C)	11900 / –	MPa	ISO 527–1/–2
Tensile modulus (100°C)	11600 / 5000	MPa	ISO 527–1/–2
Tensile modulus (120°C)	11200 / 4600	MPa	ISO 527–1/–2
Tensile modulus (150°C)	5300	MPa	ISO 527–1/–2
Tensile modulus (160°C)	4600	MPa	ISO 527–1/–2
Tensile modulus (180°C)	4000	MPa	ISO 527–1/–2
Tensile modulus (200°C)	3700	MPa	ISO 527–1/–2
Stress at break	240 / 220	MPa	ISO 527–1/–2
Stress at break (–40°C)	260 / –	MPa	ISO 527–1/–2
Stress at break (40°C)	220 / –	MPa	ISO 527–1/–2
Stress at break (80°C)	190 / –	MPa	ISO 527–1/–2
Stress at break (100°C)	170 / 76	MPa	ISO 527–1/–2
Stress at break (120°C)	145 / 68	MPa	ISO 527–1/–2

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Stress at break (150°C)	80	MPa	ISO 527–1/–2
Stress at break (160°C)	78	MPa	ISO 527–1/–2
Stress at break (180°C)	63	MPa	ISO 527–1/–2
Stress at break (200°C)	55	MPa	ISO 527–1/–2
Strain at break	2.6 / 2.4	%	ISO 527–1/–2
Strain at break (–40°C)	2.7 / –	%	ISO 527–1/–2
Strain at break (40°C)	2.5 / –	%	ISO 527–1/–2
Strain at break (80°C)	2.6 / –	%	ISO 527–1/–2
Strain at break (100°C)	2.7 / 6.6	%	ISO 527–1/–2
Strain at break (120°C)	2.8 / 6.3	%	ISO 527–1/–2
Strain at break (150°C)	8	%	ISO 527–1/–2
Strain at break (160°C)	8	%	ISO 527–1/–2
Strain at break (180°C)	8	%	ISO 527–1/–2
Strain at break (200°C)	8	%	ISO 527–1/–2
Flexural modulus	12000 / 12500	MPa	ISO 178
Flexural strength	320 / 290	MPa	ISO 178
Flexural modulus (120°C)	10900	MPa	ISO 178
Flexural modulus (160°C)	4300	MPa	ISO 178
Flexural modulus (180°C)	3900	MPa	ISO 178
Flexural modulus (200°C)	3700	MPa	ISO 178
Charpy impact strength (+23°C)	76 / 65	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	72 / 63	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 10	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	11 / 9	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)	300 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.16 / *	E–4/°C	ISO 11359–1/–2

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Coeff. of linear therm. expansion (normal)	0.51 / *	E–4/°C	ISO 11359–1/–2
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
UL recognition	No / *	–	–
Thermal Index 5000 hrs	170	°C	IEC 60216/ISO 527–1/–2

ELECTRICAL PROPERTIES	DRY / COND		
Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 62631–3–1
Electric strength	35 / 35	kV/mm	IEC 60243–1
Comparative tracking index	600 / –	V	IEC 60112

OTHER PROPERTIES	DRY / COND		
Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1490 / –	kg/m³	ISO 1183

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