

ForTii[®] MX3

PPA–GF50

50% Glass Reinforced, PA4T, Heat Stabilized, for Automotive applications

Print Date: 2024–09–17

ForTii[®] MX3 is a high Tg PPA that outperforms in dimensional stability at elevated temperatures due to the high heat deflection temperature (HDT). MX3 has excellent fatigue performance and good chemical resistance.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	0.35 / *	%	ISO 294–4
Molding shrinkage (normal)	0.9 / *	%	ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	18000 / 18300	MPa	ISO 527–1/–2
Tensile modulus (–40°C)	18300 / 18500	MPa	ISO 527–1/–2
Tensile modulus (40°C)	17600 / 17200	MPa	ISO 527–1/–2
Tensile modulus (80°C)	16800 / 10900	MPa	ISO 527–1/–2
Tensile modulus (100°C)	15700 / 8700	MPa	ISO 527–1/–2
Tensile modulus (120°C)	12400 / 7700	MPa	ISO 527–1/–2
Tensile modulus (150°C)	8200	MPa	ISO 527–1/–2
Tensile modulus (160°C)	7700	MPa	ISO 527–1/–2
Tensile modulus (180°C)	7100	MPa	ISO 527–1/–2
Tensile modulus (200°C)	6800	MPa	ISO 527–1/–2
Stress at break	260 / 240	MPa	ISO 527–1/–2
Stress at break (–40°C)	280 / 290	MPa	ISO 527–1/–2
Stress at break (40°C)	250 / 220	MPa	ISO 527–1/–2
Stress at break (80°C)	220 / 140	MPa	ISO 527–1/–2
Stress at break (100°C)	195 / 115	MPa	ISO 527–1/–2
Stress at break (120°C)	155 / 105	MPa	ISO 527–1/–2

All the trademarks mentioned here are trademarks of Envalior.

Seller represents and warrants exclusively that on the date of delivery by Seller the product shall be in conformity with the specifications agreed upon. Seller makes no other representations or warranties, whether express or implied.

Seller is not responsible or liable for the design of the products of the Customer and it is the responsibility of the Customer to determine that the Seller's product is safe, complies with application laws and regulations, and is technically or otherwise fit for its intended use. Seller does not endorse or claim suitability of its products for a specific application and disclaims each and every representation or warranty, whether express or implied, in that respect.

Typical values are indicative only and are not to be construed as being binding specifications. Colorants in the product or other additives may cause significant variations in typical values.

Copyright © Envalior 2024. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Envalior.

Property Data

ForTii[®] MX3

Print Date: 2024-09-17

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Stress at break (150°C)	115	MPa	ISO 527-1/-2
Stress at break (160°C)	105	MPa	ISO 527-1/-2
Stress at break (180°C)	90	MPa	ISO 527-1/-2
Stress at break (200°C)	82	MPa	ISO 527-1/-2
Strain at break	2.1 / 2	%	ISO 527-1/-2
Strain at break (-40°C)	2 / 2	%	ISO 527-1/-2
Strain at break (40°C)	2.1 / 2.1	%	ISO 527-1/-2
Strain at break (80°C)	2.3 / 4	%	ISO 527-1/-2
Strain at break (100°C)	2.6 / 4.5	%	ISO 527-1/-2
Strain at break (120°C)	3.6 / 5.5	%	ISO 527-1/-2
Strain at break (150°C)	5.7	%	ISO 527-1/-2
Strain at break (160°C)	6	%	ISO 527-1/-2
Strain at break (180°C)	6	%	ISO 527-1/-2
Strain at break (200°C)	6	%	ISO 527-1/-2
Flexural modulus	17300 / 17800	MPa	ISO 178
Flexural strength	390 / 310	MPa	ISO 178
Flexural modulus (120°C)	11700	MPa	ISO 178
Flexural modulus (160°C)	7500	MPa	ISO 178
Flexural modulus (180°C)	6400	MPa	ISO 178
Flexural modulus (200°C)	6000	MPa	ISO 178
Charpy impact strength (+23°C)	90 / 80	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	75 / 65	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	11 / 9	kJ/m ²	ISO 179/1eA
<i>THERMAL PROPERTIES</i>		<i>DRY / COND</i>	
Melting temperature (10°C/min)	325 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	305 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.15 / *	E-4/°C	ISO 11359-1/-2

All the trademarks mentioned here are trademarks of Envalior.

Seller represents and warrants exclusively that on the date of delivery by Seller the product shall be in conformity with the specifications agreed upon. Seller makes no other representations or warranties, whether express or implied.

Seller is not responsible or liable for the design of the products of the Customer and it is the responsibility of the Customer to determine that the Seller's product is safe, complies with application laws and regulations, and is technically or otherwise fit for its intended use. Seller does not endorse or claim suitability of its products for a specific application and disclaims each and every representation or warranty, whether express or implied, in that respect.

Typical values are indicative only and are not to be construed as being binding specifications. Colorants in the product or other additives may cause significant variations in typical values.

Copyright © Envalior 2024. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Envalior.

Property Data

ForTii[®] MX3

Print Date: 2024-09-17

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Coeff. of linear therm. expansion (normal)	0.5 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (parallel)	0.27	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.3	E-4/°C	ASTM D696
Relative Temperature Index – electrical	150	°C	UL746B
RTI electrical (Thickness (1) tested)	0.75	mm	UL746B
Thermal Index 5000 hrs	176	°C	IEC 60216/ISO 527-1/-2

ELECTRICAL PROPERTIES

DRY / COND

Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 62631-3-1
Electric strength	35 / 34	kV/mm	IEC 60243-1
Comparative tracking index	425 / –	V	IEC 60112
Relative permittivity (100Hz)	5.1 / 5.8	–	IEC 62631-2-1
Relative permittivity (1 MHz)	4.8 / 5	–	IEC 62631-2-1

OTHER PROPERTIES

DRY / COND

Humidity absorption	1.5 / *	%	Sim. to ISO 62
Density	1650 / –	kg/m ³	ISO 1183

All the trademarks mentioned here are trademarks of Envalior.

Seller represents and warrants exclusively that on the date of delivery by Seller the product shall be in conformity with the specifications agreed upon. Seller makes no other representations or warranties, whether express or implied.

Seller is not responsible or liable for the design of the products of the Customer and it is the responsibility of the Customer to determine that the Seller's product is safe, complies with application laws and regulations, and is technically or otherwise fit for its intended use. Seller does not endorse or claim suitability of its products for a specific application and disclaims each and every representation or warranty, whether express or implied, in that respect.

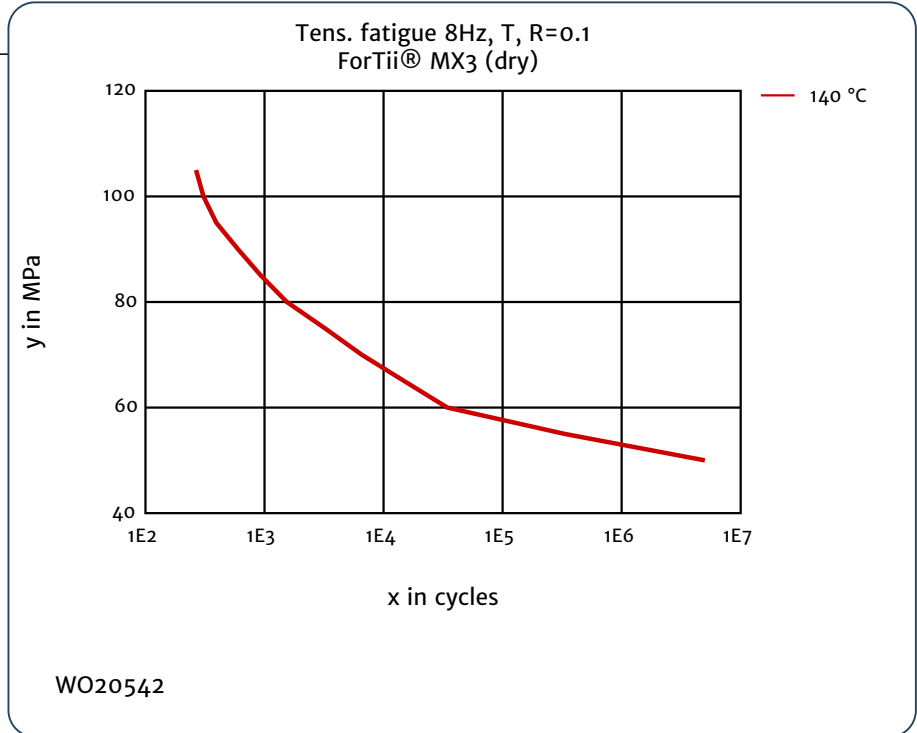
Typical values are indicative only and are not to be construed as being binding specifications. Colorants in the product or other additives may cause significant variations in typical values.

Copyright © Envalior 2024. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Envalior.

ForTii[®] MX3

Print Date: 2024-09-17

Tens. fatigue 8Hz, T, R=0.1 ,
dry



All the trademarks mentioned here are trademarks of Envalior.
Seller represents and warrants exclusively that on the date of delivery by Seller the product shall be in conformity with the specifications agreed upon. Seller makes no other representations or warranties, whether express or implied.
Seller is not responsible or liable for the design of the products of the Customer and it is the responsibility of the Customer to determine that the Seller's product is safe, complies with application laws and regulations, and is technically or otherwise fit for its intended use. Seller does not endorse or claim suitability of its products for a specific application and disclaims each and every representation or warranty, whether express or implied, in that respect.
Typical values are indicative only and are not to be construed as being binding specifications. Colorants in the product or other additives may cause significant variations in typical values.
Copyright © Envalior 2024. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Envalior.