

Stanyl® TW271B3

(PA46+PTFE)–CF15

15% Carbon Reinforced, Heat Stabilized, Wear and Friction Modified

Print Date: 2024–03–27

Stanyl® TW271B3 is a friction–modified high heat polyamide that offers excellent creep resistance, strength, stiffness and fatigue resistance, not only at ambient temperatures but especially at high temperatures, while at the same time providing cycle–time advantages and excellent flow. TW271B3 has an excellent track–record in gear applications.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	0.2 / *	%	ISO 294–4
Molding shrinkage (normal)	0.8 / *	%	ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	13500 / 6700	MPa	ISO 527–1/–2
Tensile modulus (120°C)	6300 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	5700	MPa	ISO 527–1/–2
Tensile modulus (180°C)	5400	MPa	ISO 527–1/–2
Tensile modulus (200°C)	5100	MPa	ISO 527–1/–2
Stress at break	195 / 120	MPa	ISO 527–1/–2
Stress at break (120°C)	108 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	92	MPa	ISO 527–1/–2
Stress at break (180°C)	84	MPa	ISO 527–1/–2
Stress at break (200°C)	76	MPa	ISO 527–1/–2
Strain at break	2.1 / 5	%	ISO 527–1/–2
Strain at break (120°C)	5 / –	%	ISO 527–1/–2
Strain at break (160°C)	5	%	ISO 527–1/–2
Strain at break (180°C)	5	%	ISO 527–1/–2
Strain at break (200°C)	5	%	ISO 527–1/–2
Flexural modulus	12000 / 5800	MPa	ISO 178

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

Stanyl® TW271B3

Print Date: 2024-03-27

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Flexural modulus (120°C)	6300	MPa	ISO 178
Flexural modulus (160°C)	5900	MPa	ISO 178
Flexural strength	280 / 150	MPa	ISO 178
Flexural strength (120°C)	150	MPa	ISO 178
Flexural strength (160°C)	120	MPa	ISO 178
Charpy impact strength (+23°C)	50 / 57	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	45 / 45	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	6 / 12	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	5 / 4.5	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	6 / 12	kJ/m ²	ISO 180/1A
<i>THERMAL PROPERTIES</i>		<i>DRY / COND</i>	
Melting temperature (10°C/min)	295 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	290 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.25 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.5 / *	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	Yes / *	-	-
<i>ELECTRICAL PROPERTIES</i>		<i>DRY / COND</i>	
Volume resistivity	100000 / -	Ohm*m	IEC 62631-3-1
<i>OTHER PROPERTIES</i>		<i>DRY / COND</i>	
Humidity absorption	2.6 / *	%	Sim. to ISO 62
Density	1320 / -	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.