

Stanyl® TW271F6

(PA46+PTFE)–GF30

30% Glass Reinforced, Heat Stabilized, Wear and Friction Modified

Print Date: 2024–12–10

Stanyl® TW271F6 is a friction–modified high heat polyamide that offers excellent creep resistance, strength, stiffness and fatigue resistance especially at high temperatures in combination with cycle–time advantages and excellent flow. TW271F6 has an excellent track–record in gear applications.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
DRY / COND			
Molding shrinkage [parallel]	0.5 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	1.3 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES			
DRY / COND			
Tensile modulus	10500 / 6600	MPa	ISO 527–1/–2
Tensile modulus (120°C)	5250 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	4750	MPa	ISO 527–1/–2
Tensile modulus (180°C)	4500	MPa	ISO 527–1/–2
Tensile modulus (200°C)	4250	MPa	ISO 527–1/–2
Stress at break	200 / 130	MPa	ISO 527–1/–2
Stress at break (120°C)	100 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	85	MPa	ISO 527–1/–2
Stress at break (180°C)	80	MPa	ISO 527–1/–2
Stress at break (200°C)	75	MPa	ISO 527–1/–2
Strain at break	3.4 / 6	%	ISO 527–1/–2
Strain at break (120°C)	6.5 / –	%	ISO 527–1/–2
Strain at break (160°C)	6.5	%	ISO 527–1/–2
Strain at break (180°C)	6.5	%	ISO 527–1/–2
Strain at break (200°C)	6.5	%	ISO 527–1/–2
Flexural modulus	9000 / 6000	MPa	ISO 178

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.

Stanyl® TW271F6

Print Date: 2024-12-10

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Flexural modulus (120°C)	5400	MPa	ISO 178
Flexural modulus (160°C)	5000	MPa	ISO 178
Flexural strength	280 / 150	MPa	ISO 178
Flexural strength (120°C)	135	MPa	ISO 178
Flexural strength (160°C)	120	MPa	ISO 178
Charpy impact strength (+23°C)	85 / 90	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	65 / 70	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	13 / 17	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	11 / 11	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	13 / 17	kJ/m²	ISO 180/1A
Izod notched impact strength (-40°C)	11 / 11	kJ/m²	ISO 180/1A

THERMAL PROPERTIES	DRY / COND		
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
Temp. of deflection under load (0.45 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)	0.6 / *	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 / *	—	—
Thermal Index 5000 hrs	177	°C	IEC 60216/ISO 527-1/-2

ELECTRICAL PROPERTIES	DRY / COND		
Volume resistivity	1E12 / 1E7	Ohm*m	IEC 62631-3-1
Comparative tracking index	400 / —	V	IEC 60112

OTHER PROPERTIES	DRY / COND		
------------------	------------	--	--

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® TW271F6

Print Date: 2024-12-10

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1530 / –	kg/m³	ISO 1183

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.