

Stanyl® TW278F10

(PA46+PTFE)–GF50

50% Glass Fiber Reinforced, Heat Stabilized, Wear and Friction Modified

Print Date: 2026–03–11

Stanyl® TW278F10 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. TW278F10 has an excellent track–record in gear applications.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage [parallel]	0.4 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	0.9 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	16500 / 10700	MPa	ISO 527–1/–2
Tensile modulus (160°C)	8300	MPa	ISO 527–1/–2
Tensile modulus (200°C)	7600	MPa	ISO 527–1/–2
Stress at break	235 / 170	MPa	ISO 527–1/–2
Stress at break (160°C)	120	MPa	ISO 527–1/–2
Stress at break (200°C)	105	MPa	ISO 527–1/–2
Strain at break	2.2 / 3.3	%	ISO 527–1/–2
Strain at break (160°C)	3.4	%	ISO 527–1/–2
Strain at break (200°C)	3.5	%	ISO 527–1/–2
Flexural modulus	16500 / 12000	MPa	ISO 178
Flexural strength	330 / 255	MPa	ISO 178
Charpy impact strength (+23°C)	55 / 85	kJ/m ²	ISO 179/1eU
Charpy impact strength (–30°C)	35 / 65	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	18 / 13	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (–30°C)	11 / 8.5	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	18 / –	kJ/m ²	ISO 180/1A

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 2026. 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® TW278F10

Print Date: 2026-03-11

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
THERMAL PROPERTIES			
<i>DRY / COND</i>			
Melting temperature (10°C/min)	290 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	285 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	288 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.11 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.55 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (parallel)	0.3	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.3	E-4/°C	ASTM D696
ELECTRICAL PROPERTIES			
<i>DRY / COND</i>			
Volume resistivity	1E12 / -	Ohm*m	IEC 62631-3-1
Electric strength	33 / -	kV/mm	IEC 60243-1
Comparative tracking index	350 / -	V	IEC 60112
OTHER PROPERTIES			
<i>DRY / COND</i>			
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1700 / -	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 2026. 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® TW278F10

Print Date: 2026-03-11

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

