Property Data

Envalior
Imagine the Future

Stanyl® HFX61S

PA46–GF35 FR(40)

35% Glass Fiber Reinforced, High Flow, Halogen free and free of red phosphorous

Print Date: 2026–09–03

Stanyl® HFX61S is an electro–friendly & halogen–free flame–retarded high heat polyamide that offers an excellent combination of high CTI, flow and weld–line strength. HFX–grades are often used in connectors such as USB type C.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	0.4 / *	%	ISO 294–4
Molding shrinkage (normal)	1.1 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	11800 / 8400	MPa	ISO 527–1/–2
Tensile modulus (120°C)	6400 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	5700	MPa	ISO 527–1/–2
Stress at break	140 / 100	MPa	ISO 527–1/–2
Stress at break (120°C)	83 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	70	MPa	ISO 527–1/–2
Strain at break	2.4 / 3.3	%	ISO 527–1/–2
Strain at break (120°C)	4 / –	%	ISO 527–1/–2
Strain at break (160°C)	4.4	%	ISO 527–1/–2
Flexural modulus	10500 / 8000	MPa	ISO 178
Flexural modulus (120°C)	6900	MPa	ISO 178
Flexural modulus (160°C)	6300	MPa	ISO 178
Flexural strength	210 / 200	MPa	ISO 178
Flexural strength (120°C)	135	MPa	ISO 178
Flexural strength (160°C)	115	MPa	ISO 178
Charpy impact strength (+23°C)	50 / 60	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	9 / 10	kJ/m²	ISO 179/1eA

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® HFX61S

Print Date: 2026–09–03

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
THERMAL PROPERTIES	DRY / COND		
Melting temperature (10°C/min)	295 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	285 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.17 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.7 / *	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)	0.4	E–4/°C	ASTM D696
Burning Behav. at 1.5 mm nom. thickn.	V–0 / *	class	IEC 60695–11–10
Thickness tested	1.5 / *	mm	IEC 60695–11–10
UL recognition	Yes / *	–	–
Burning Behav. at 3.0 mm nom. thickn.	V–0 / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
UL recognition	Yes / *	–	–
Relative Temperature Index – electrical	120	°C	UL746B
RTI electrical (Thickness (1) tested)	0.18	mm	UL746B
ELECTRICAL PROPERTIES	DRY / COND		
Volume resistivity	>1E13 / 1E11	Ohm*m	IEC 62631–3–1
Electric strength	30 / 24	kV/mm	IEC 60243–1
Comparative tracking index	550 / –	V	IEC 60112
Relative permittivity (100Hz)	4.4 / 11	–	IEC 62631–2–1
Relative permittivity (1 MHz)	4.1 / 5	–	IEC 62631–2–1
Relative permittivity (1GHz)	3.9 / 4.1	–	IEC 61189–2–721
Relative permittivity (10GHz)	3.8 / 4	–	IEC 61189–2–721
OTHER PROPERTIES	DRY / COND		
Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1510 / –	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.