

# Stanyl® TE250F9

## PA46–GF45 FR(17)

45% Glass Reinforced, Heat Stabilized, Flame Retardant

Print Date: 2024–03–27

Stanyl® TE250F9 is an electro–friendly & flame–retarded 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.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
<b>RHEOLOGICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Molding shrinkage [parallel]	0.3 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	0.9 / *	%	Sim. to ISO 294–4
<b>MECHANICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Tensile modulus	17000 / 11000	MPa	ISO 527–1/–2
Tensile modulus (120°C)	9000 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	7700	MPa	ISO 527–1/–2
Stress at break	200 / 130	MPa	ISO 527–1/–2
Stress at break (120°C)	110 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	90	MPa	ISO 527–1/–2
Strain at break	2.2 / 4	%	ISO 527–1/–2
Strain at break (120°C)	4.5 / –	%	ISO 527–1/–2
Strain at break (160°C)	5.5	%	ISO 527–1/–2
Flexural modulus	15000 / 11000	MPa	ISO 178
Flexural modulus (120°C)	10500	MPa	ISO 178
Flexural modulus (160°C)	9000	MPa	ISO 178
Flexural strength	300 / 250	MPa	ISO 178
Flexural strength (120°C)	230	MPa	ISO 178
Flexural strength (160°C)	200	MPa	ISO 178
Charpy impact strength (+23°C)	65 / 75	kJ/m <sup>2</sup>	ISO 179/1eU

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## Property Data

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Charpy impact strength (-30°C)	50 / 50	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	14 / 15	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	13 / 13	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength (+23°C)	13 / 15	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength (-40°C)	13 / 13	kJ/m <sup>2</sup>	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)	0.2 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.45 / *	E-4/°C	ISO 11359-1/-2
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	140	°C	UL746B
RTI electrical (Thickness (1) tested)	0.75	mm	UL746B
Thermal Index 5000 hrs	163	°C	IEC 60216/ISO 527-1/-2

### ELECTRICAL PROPERTIES

#### DRY / COND

Volume resistivity	1E13 / 1E8	Ohm*m	IEC 62631-3-1
Electric strength	30 / 20	kV/mm	IEC 60243-1
Comparative tracking index	250 / -	V	IEC 60112
Relative permittivity (100Hz)	4.3 / 12	-	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 4.5	-	IEC 62631-2-1

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<b>OTHER PROPERTIES</b>	<b>DRY / COND</b>		
Humidity absorption	1.2 / *	%	Sim. to ISO 62
Density	1820 / –	kg/m <sup>3</sup>	ISO 1183

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