

Stanyl® TS250F6D

PA46–GF30 FR(17)

30% Glass Reinforced, Flame Retardant, Heat Stabilized, Improved resistance to blistering during reflow – soldering process

Print Date: 2024–03–27

Stanyl® TS250F6D 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
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage [parallel]	0.4 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	1.1 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	12400 / 8500	MPa	ISO 527–1/–2
Tensile modulus (120°C)	7300 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	5500	MPa	ISO 527–1/–2
Stress at break	180 / 115	MPa	ISO 527–1/–2
Stress at break (120°C)	100 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	80	MPa	ISO 527–1/–2
Strain at break	2.2 / 3	%	ISO 527–1/–2
Strain at break (120°C)	4 / –	%	ISO 527–1/–2
Strain at break (160°C)	6	%	ISO 527–1/–2
Flexural modulus	11300 / 7500	MPa	ISO 178
Flexural modulus (120°C)	6500	MPa	ISO 178
Flexural modulus (160°C)	5000	MPa	ISO 178
Flexural strength	250 / 190	MPa	ISO 178
Flexural strength (120°C)	170	MPa	ISO 178
Flexural strength (160°C)	140	MPa	ISO 178
Charpy impact strength (+23°C)	60 / 60	kJ/m ²	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 ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 12	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	11 / 11	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	11 / 11	kJ/m ²	ISO 180/1A
Izod notched impact strength (-40°C)	11 / 11	kJ/m ²	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)	0.55 / *	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)	0.67	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 / 10	-	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>
Relative permittivity (1GHz)	3.6 / 3.8	–	IEC 61189-2-721
<i>OTHER PROPERTIES</i>		<i>DRY / COND</i>	
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1680 / –	kg/m ³	ISO 1183

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