

Stanyl[®] TW371

(PA46+PTFE)

Heat Stabilized, Wear and Friction Modified

Stanyl[®] TW371 is a friction-modified high heat polyamide that offers excellent wear & friction properties in combination with outstanding 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]	2 / *	%	Sim. to ISO 294-4
Molding shrinkage [normal]	2 / *	%	Sim. to ISO 294-4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	3000 / 1000	MPa	ISO 527-1/-2
Tensile modulus (120°C)	750 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	650	MPa	ISO 527-1/-2
Tensile modulus (180°C)	600	MPa	ISO 527-1/-2
Tensile modulus (200°C)	560	MPa	ISO 527-1/-2
Yield stress	90 / 50	MPa	ISO 527-1/-2
Yield stress (120°C)	45	MPa	ISO 527-1/-2
Yield stress (160°C)	40	MPa	ISO 527-1/-2
Yield stress (180°C)	35	MPa	ISO 527-1/-2
Yield stress (200°C)	30	MPa	ISO 527-1/-2
Nominal strain at break	25 / >50	%	ISO 527-1/-2
Nominal strain at break (120°C)	>50	%	ISO 527-1/-2
Nominal strain at break (160°C)	>50	%	ISO 527-1/-2
Nominal strain at break (180°C)	>50	%	ISO 527-1/-2
Nominal strain at break (200°C)	>50	%	ISO 527-1/-2
Flexural modulus	2850 / 900	MPa	ISO 178

Property Data

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Flexural modulus (120°C)	700	MPa	ISO 178
Flexural modulus (160°C)	650	MPa	ISO 178
Flexural strength	110 / –	MPa	ISO 178
Flexural strength (120°C)	23	MPa	ISO 178
Flexural strength (160°C)	21	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy impact strength (–30°C)	150 / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	9 / 15	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (–30°C)	5 / 5	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	7 / 14	kJ/m ²	ISO 180/1A
Izod notched impact strength (–40°C)	5 / 5	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)	190 / *	°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)	0.85 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	1.1 / *	E–4/°C	ISO 11359–1/–2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	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.	HB / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
UL recognition	Yes / *	–	–
Thermal Index 5000 hrs	152	°C	IEC 60216/ISO 527–1/–2

ELECTRICAL PROPERTIES

DRY / COND

Volume resistivity	1E12 / 1E7	Ohm*m	IEC 62631–3–1
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Property Data

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Comparative tracking index	400 / –	V	IEC 60112

OTHER PROPERTIES

DRY / COND

Humidity absorption	3.2 / *	%	Sim. to ISO 62
Density	1250 / –	kg/m ³	ISO 1183

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

