Property Data

Envalior
Imagine the Future

Stanyl® TW341

PA46

Heat Stabilized, Lubricated

Print Date: 2024–02–08

Stanyl® TW341 is a V2 UL–rated, non–reinforced 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	3300 / 1000	MPa	ISO 527–1/–2
Tensile modulus (120°C)	800 / –	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)	500	MPa	ISO 527–1/–2
Yield stress	100 / 55	MPa	ISO 527–1/–2
Yield stress (120°C)	50	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	40 / >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	3000 / 900	MPa	ISO 178

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PROPERTIES	*TYPICAL DATA*	*UNIT*	*TEST METHOD*
Flexural modulus (120°C)	800	MPa	ISO 178
Flexural modulus (160°C)	600	MPa	ISO 178
Flexural strength	150 / 50	MPa	ISO 178
Flexural strength (120°C)	50	MPa	ISO 178
Flexural strength (160°C)	40	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	N / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 35	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	4 / 4	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	10 / 35	kJ/m²	ISO 180/1A
Izod notched impact strength (–40°C)	4 / 4	kJ/m²	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)	280 / *	°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.	V–2 / *	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–2 / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
UL recognition	Yes / *	–	–
Relative Temperature Index – electrical	150	°C	UL746B
RTI electrical (Thickness (1) tested)	0.75	mm	UL746B
Thermal Index 5000 hrs	152	°C	IEC 60216/ISO 527–1/–2

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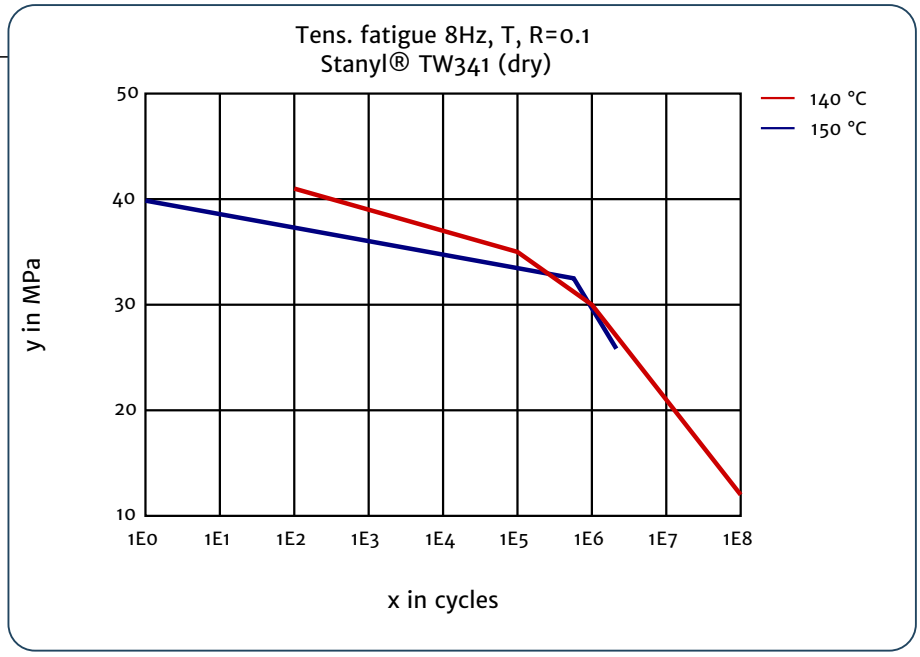
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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
ELECTRICAL PROPERTIES	DRY / COND		
Volume resistivity	1E13 / 1E7	Ohm*m	IEC 62631–3–1
Electric strength	25 / 15	kV/mm	IEC 60243–1
Comparative tracking index	400 / –	V	IEC 60112
Relative permittivity (100Hz)	3.9 / 22	–	IEC 62631–2–1
Relative permittivity (1 MHz)	3.6 / 4.5	–	IEC 62631–2–1
OTHER PROPERTIES	DRY / COND		
Humidity absorption	3.7 / *	%	Sim. to ISO 62
Density	1180 / –	kg/m³	ISO 1183

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



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