

# Stanyl<sup>®</sup> TS272A1

## (PA46+PTFE)–AF

Aramid fibre reinforced, Wear and Friction Modified

Print Date: 2024–06–20

Stanyl<sup>®</sup> TS272A1 is a aramid–reinforced friction–modified high heat polyamide that offers extremely low abrasion for gear & bushing applications

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
<b>RHEOLOGICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Molding shrinkage (parallel)	2.2 / *	%	ISO 294–4
Molding shrinkage (normal)	2.2 / *	%	ISO 294–4
<b>MECHANICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Tensile modulus	2800 / 1100	MPa	ISO 527–1/–2
Tensile modulus (120°C)	780 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	630	MPa	ISO 527–1/–2
Tensile modulus (180°C)	590	MPa	ISO 527–1/–2
Tensile modulus (200°C)	560	MPa	ISO 527–1/–2
Yield stress	* / 50	MPa	ISO 527–1/–2
Yield stress (120°C)	44	MPa	ISO 527–1/–2
Yield stress (160°C)	36	MPa	ISO 527–1/–2
Yield stress (180°C)	33	MPa	ISO 527–1/–2
Yield stress (200°C)	30	MPa	ISO 527–1/–2
Nominal strain at break	* / >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
Stress at break	80 / *	MPa	ISO 527–1/–2
Strain at break	16 / *	%	ISO 527–1/–2

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## Property Data

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Flexural modulus	2800 / –	MPa	ISO 178
Flexural modulus (120°C)	800	MPa	ISO 178
Flexural modulus (160°C)	700	MPa	ISO 178
Flexural strength	100 / –	MPa	ISO 178
Flexural strength (120°C)	25	MPa	ISO 178
Flexural strength (160°C)	20	MPa	ISO 178
Charpy impact strength (+23°C)	87 / N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (–30°C)	60 / 63	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	5 / 5	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (–30°C)	3 / 3	kJ/m <sup>2</sup>	ISO 179/1eA
<b><i>THERMAL PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Melting temperature (10°C/min)	295 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	160 / *	°C	ISO 75-1/-2
<b><i>OTHER PROPERTIES</i></b>		<b><i>DRY / COND</i></b>	
Humidity absorption	3 / *	%	Sim. to ISO 62
Density	1260 / –	kg/m <sup>3</sup>	ISO 1183

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