

Properties of ZYTEL® nylon resins

Unreinforced

X

Property	Test conditions	Standard ISO	Units	PA66		PA66		
				ZYTEL® 101L		ZYTEL® 101F		
				DAM	50% RH	DAM	50% RH	
MECHANICAL	Yield stress	50 mm/min, 23°C	527-1/-2	MPa	83	53	83	53
	Yield strain	50 mm/min, 23°C	527-1/-2	%	4,5	25	4,5	25
	Stress at break (tensile)	5 mm/min, 23°C	527-1/-2	MPa				
	Strain at break (tensile)	5 mm/min, 23°C	527-1/-2	%				
		50 mm/min, 23°C			40	>50	40	>50
	Nominal strain at break	50 mm/min, 23°C	527-1/-2	%	22	>100	18	>100
	Tensile modulus	1 mm/min, 23°C	527-1/-2	MPa	3100	1200	3100	1200
	Charpy impact strength (unnotched)	23°C	179/1eU	kJ/m ²	NB	NB	NB	NB
		-30°C			NB	NB	NB	NB
	Charpy impact strength (notched)	23°C	179/1eA	kJ/m ²	5	15	5	15
		-30°C			4	4	4	4
	Izod impact strength (notched)	23°C	180/1A	kJ/m ²	5	13	5	13
-30°C				5	4	5	4	
THERMAL	Melting temperature	10°C/min	11357-1/-3	°C	263		263	
	Temperature of deflection under load	0,45 MPa	75-1/-2	°C	200		200	
		1,8 MPa			70		70	
	Vicat softening temperature	50N, 50°C/h	306	°C	240		240	
	Coefficient of linear thermal expansion	Parallel (in flow direction)	23°C-55°C	11359-2	10 ⁻⁴ /°C	1		1
Normal (perpendicular to flow)		23°C-55°C			1,1		1,1	
ELECTRICAL	Comparative tracking index	23°C	IEC 60112	V	600		600	
	Electric strength (dielectric strength)	1 mm, 23°C	IEC 60243-1	kV/mm	31	28	31	26
	Surface resistivity	23°C	IEC 60093	ohm	10 ¹²	>10 ¹⁵	10 ¹²	10 ¹²
	Volume resistivity	23°C	IEC 60093	ohm · m	10 ¹²	10 ¹⁰	10 ¹⁴	10 ¹¹
	Relative permittivity	10 ² Hz, 1 mm, 23°C	IEC 60250		3,8	10,9	3,8	10,9
		10 ⁶ Hz, 1 mm, 23°C			3,5	4	3,5	4,6
Dissipation factor	10 ² Hz, 1 mm, 23°C	IEC 60250	10 ⁻⁴	80	2100	140	2100	
	10 ⁶ Hz, 1 mm, 23°C			180	750	180	1000	
OTHERS	Density		1183	kg/m ³	1140		1140	
	Flammability classification ¹⁾	1,5 mm	UL 94/ISO1210		V2		V2	
	Glow wire flammability index	1,5 mm	60695-2-1	°C	850		850	
	Oxygen index		4589-1-2	%	28	31	28	
	Water absorption	Equilibrium, 50% RH, 23°C	Similar	%	2,7		2,7	
		Saturation, immersed, 23°C	to ISO 62		8,5		8,5	
	Rockwell hardness	Scale M, 23°C	2039/2		79	59	71	
		Scale R, 23°C			121	108	113	
	Ball indentation hardness	H 358/30	23°C	2039-1	MPa		85	
		H 961/30	23°C			160		
Mould shrinkage ²⁾	Parallel (in flow direction)	2 mm	294-4	%	1,3		1,3	
	Normal (perpendicular to flow)	2 mm			1,3		1,3	

1) Numerical flame test ratings are not intended to present behaviour of moulded parts in real life fire conditions; each end-user must determine whether any potential flammability hazards exist with parts moulded from ZYTEL® nylon resins. UL yellow cards available upon request.

2) Depends on moulding conditions.

All the above information is subject to the disclaimer printed on the back page of this document.