

Zytel® 74G33W NC010

NYLON RESIN

Common features of Zytel® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, Zytel® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. Zytel® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of Zytel® nylon resin normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-31kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

Zytel® 74G33W NC010 is a high gloss automotive weatherable 33% glass reinforced nylon 66 and nylon 6 comelt resin.

Product information

Resin Identification	PA66+PA6-GF3 3	ISO 1043
Part Marking Code	>PA66+PA6-GF33<	ISO 11469
ISO designation	ISO 16396-(PA66+PA6),GF33,M1GL1N,S14-110	

Rheological properties

	dry/cond.		
Moulding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.9 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile Modulus	11000 / 7500	MPa	ISO 527-1/-2
Stress at break, 5mm/min	190 / 130 ^[A]	MPa	ISO 527-1/-2
Strain at break, 5mm/min	4 / 6	%	ISO 527-1/-2
Flexural Modulus	8900 / -	MPa	ISO 178
Charpy impact strength, 23°C	95 / 100	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	16 / 18	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	10 / 10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -40°C	12 / -	kJ/m ²	ISO 179/1eA
Poisson's ratio	0.34 / 0.34		

[A]: Assessed

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	245 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	220 / *	°C	ISO 75-1/-2



Zytel® 74G33W NC010

NYLON RESIN

Flammability

FMVSS Class	B	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80 mm/min	ISO 3795 (FMVSS 302)

Other properties

	dry/cond.	
Density	1390/- kg/m ³	ISO 1183

Injection

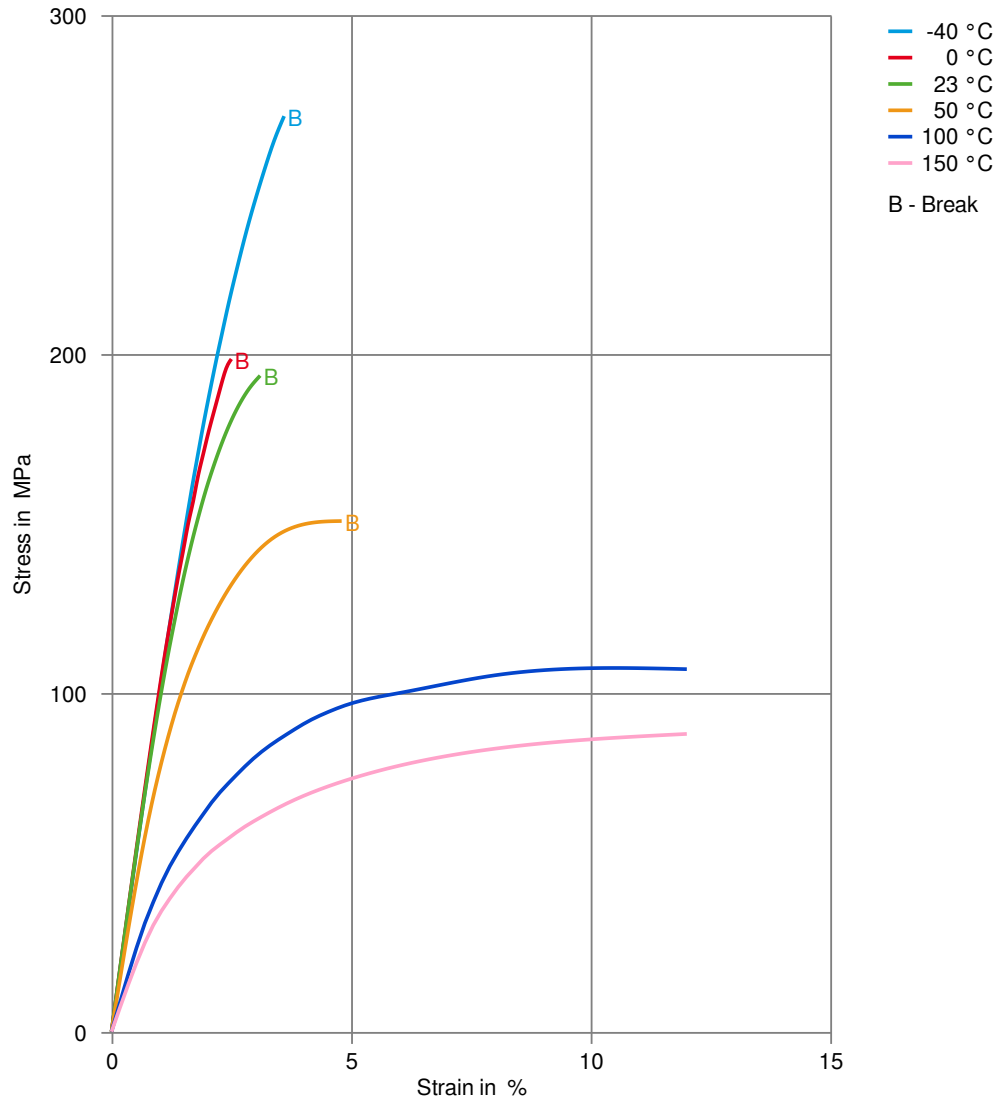
Drying Recommended	yes	
Drying Temperature	80 °C	
Drying Time, Dehumidified Dryer	2 - 4 h	
Processing Moisture Content	≤0.2 %	
Melt Temperature Optimum	290 °C	Internal
Min. melt temperature	280 °C	
Max. melt temperature	300 °C	
Screw tangential speed	≤0.2 m/s	
Mold Temperature Optimum	100 °C	
Min. mould temperature	70 °C	
Max. mould temperature	120 °C	
Hold pressure range	50 - 100 MPa	
Hold pressure time	3 s/mm	
Ejection temperature	210 °C	Internal



Zytel® 74G33W NC010

NYLON RESIN

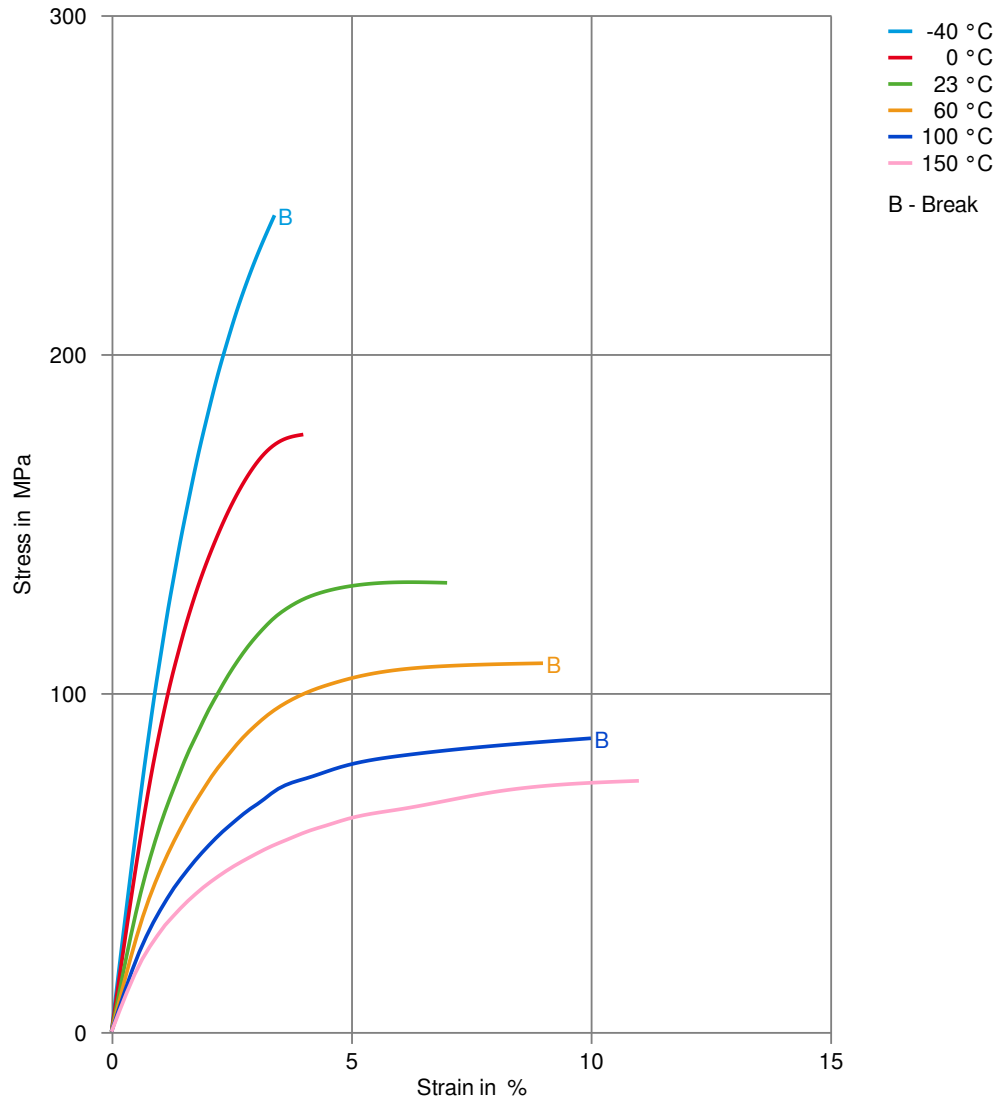
Stress-strain (dry)



Zytel® 74G33W NC010

NYLON RESIN

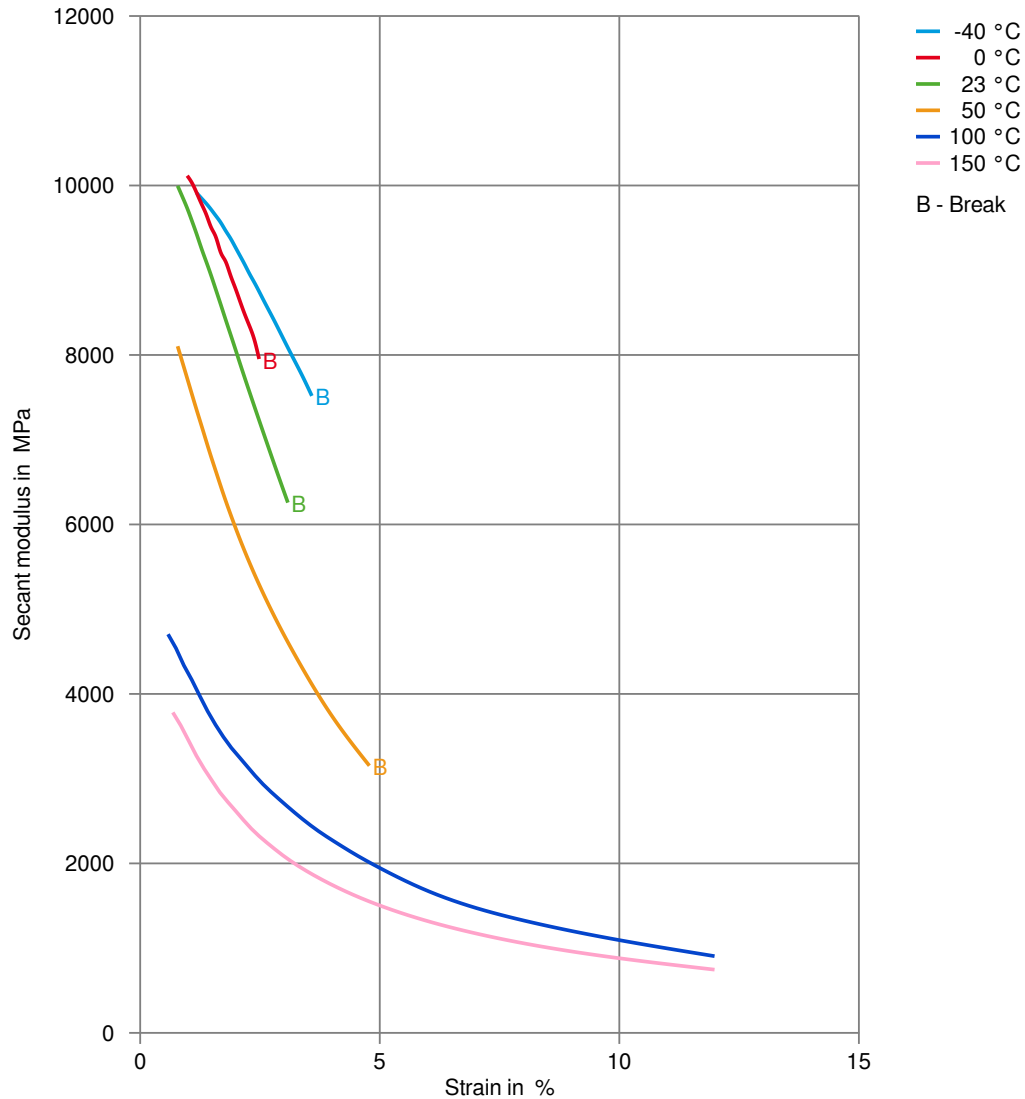
Stress-strain (cond.)



Zytel® 74G33W NC010

NYLON RESIN

Secant modulus-strain (dry)



Zytel® 74G33W NC010

NYLON RESIN

Secant modulus-strain (cond.)

