

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 | 10900 / 7500 | MPa | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 194 / 130 ^[A] | MPa | ISO 527-1/-2 |
| Tensile 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 | 12.3 / - | 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 |
| Temperature of deflection under load, 1.8 MPa | 225 / * | °C | ISO 75-1/-2 |

Flammability

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

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Physical/Other properties

| | | | | |
|---------|-----------|--------|-------------------|----------|
| Density | dry/cond. | 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 |
| 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 |

Characteristics

| | |
|------------|--------------------|
| Processing | Injection Moulding |
|------------|--------------------|

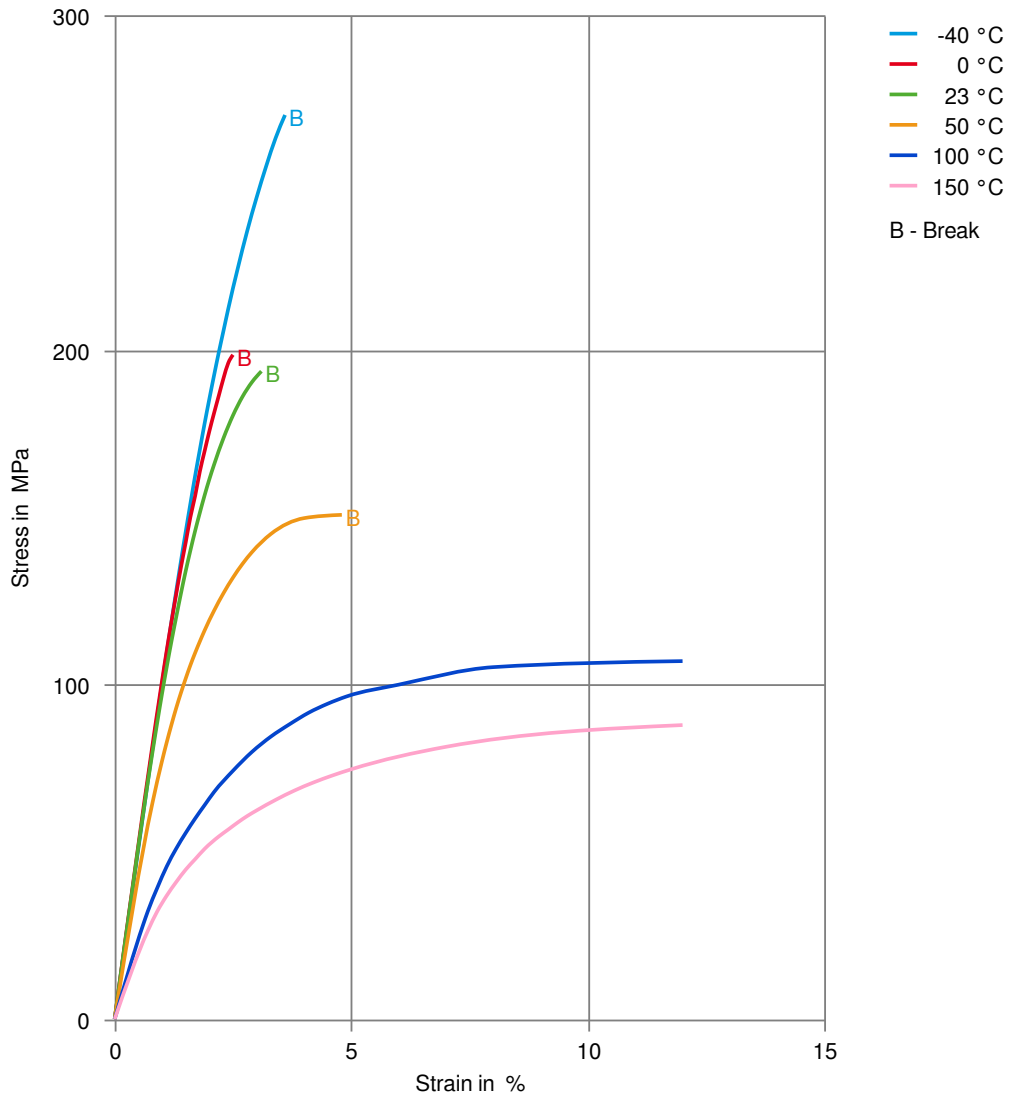
Automotive

| OEM | STANDARD | ADDITIONAL INFORMATION |
|-----------------------|--|------------------------|
| Ford | WSS-M98P13-E | |
| General Motors | Natural; Part Specific Approval, Please Contact Your CE Representative For More Details. | |
| Stellantis - Chrysler | MS.50017 / CPN-4075 | Natural |

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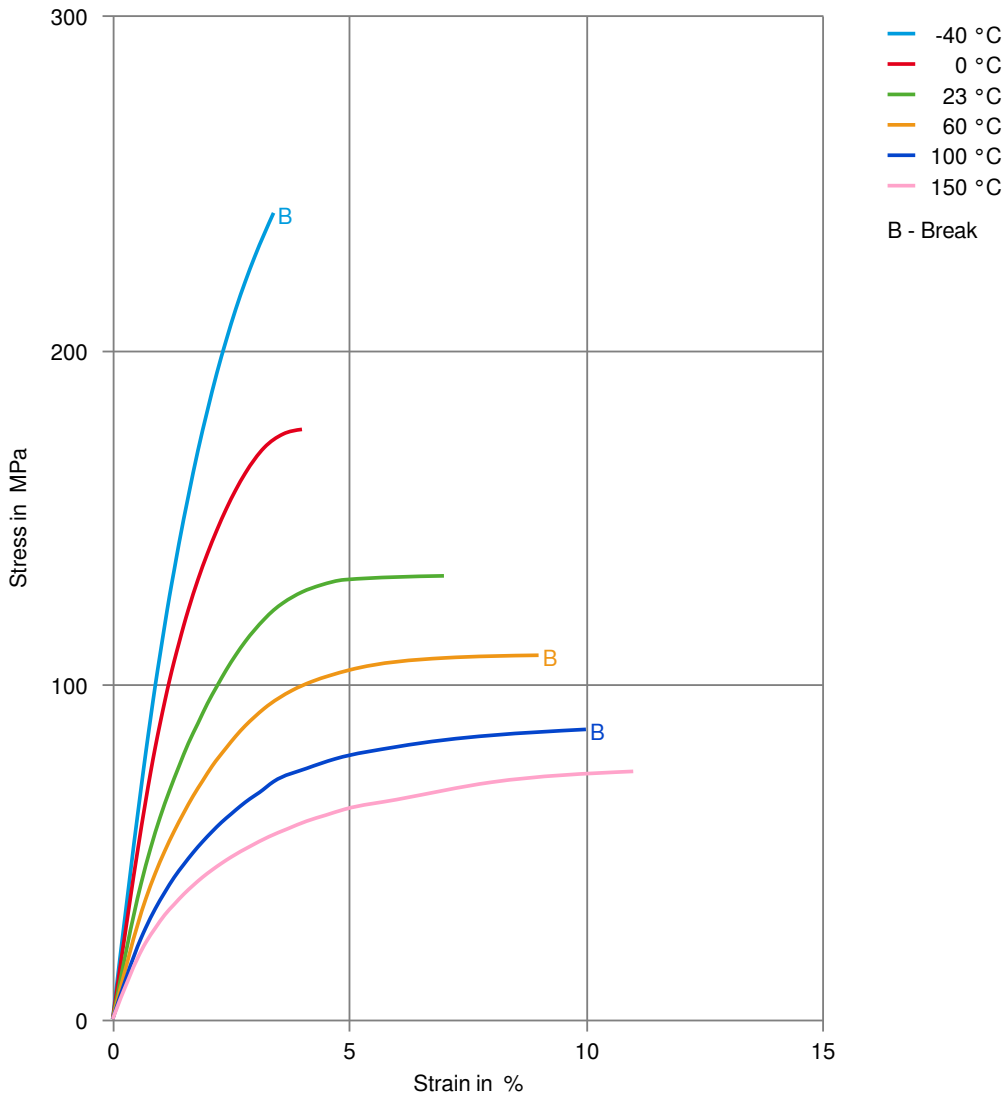
Stress-strain (dry)



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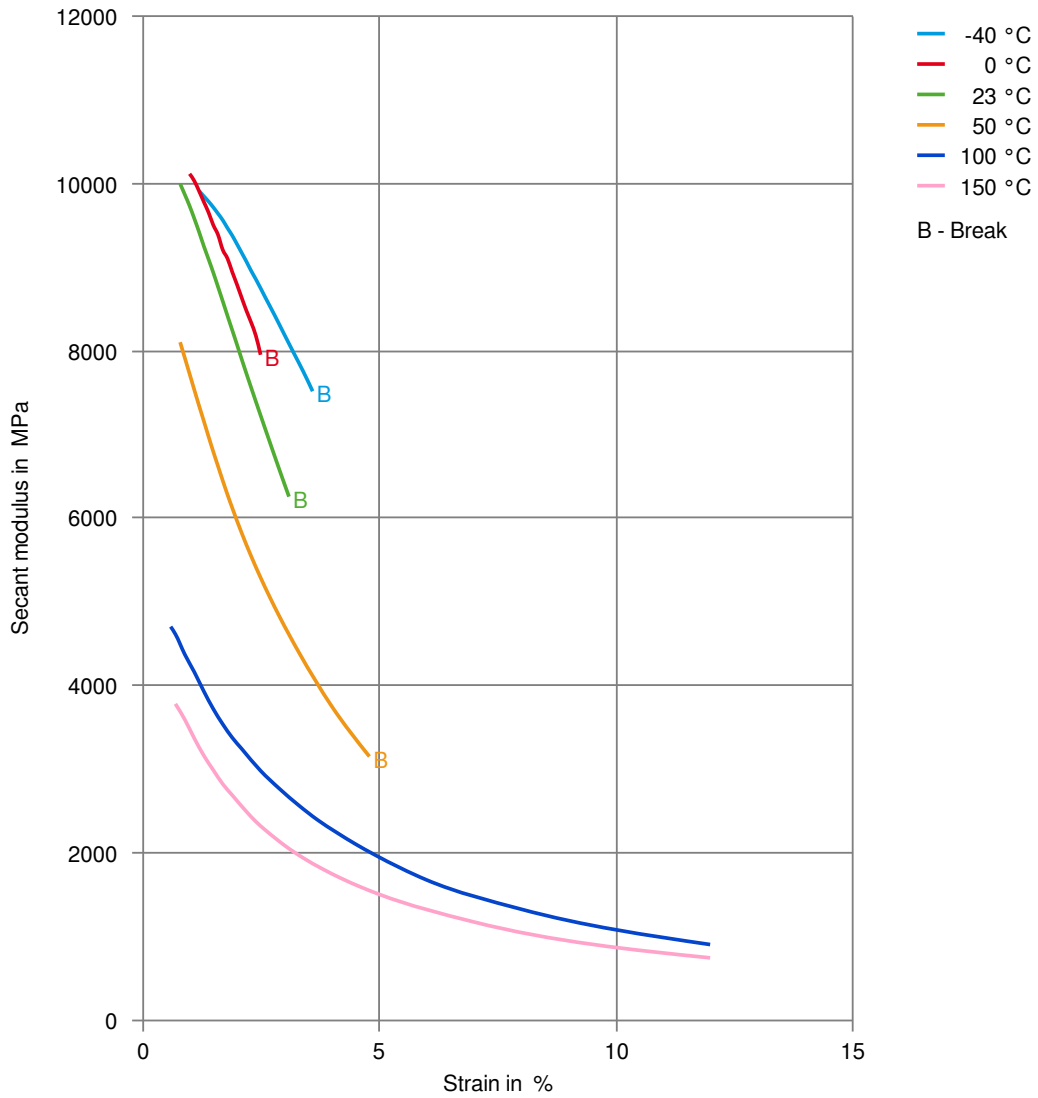
Stress-strain (cond.)



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Secant modulus-strain (dry)



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Secant modulus-strain (cond.)

