Celanese
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# CELANYL® A3 HHR3 GF30 BK 9005

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*Designed for Automotive industry, specifically to withstand contact with coolant and oils in extreme thermal conditions.*

## Product information

| | | |
|---|---|---|
| Resin Identification | PA66-GF30 | ISO 1043 |
| Part Marking Code | >PA66-GF30< | ISO 11469 |

## Rheological properties

| | | | |
|---|---|---|---|
| Moulding shrinkage range, parallel | 0.3 - 0.6 | % | ISO 294-4, 2577 |
| Moulding shrinkage range, normal | 0.6 - 0.9 | % | ISO 294-4, 2577 |

## Typical mechanical properties

| | dry/cond. | | |
|---|---|---|---|
| Tensile modulus | 10000 / 7000 | MPa | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 190 / 135 | MPa | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 3.2 / 6 | % | ISO 527-1/-2 |
| Flexural modulus | 10000 / 7400 | MPa | ISO 178 |
| Flexural strength | 280 / 190 | MPa | ISO 178 |
| Charpy impact strength, 23°C | 85 / 90 | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 12 / 17 | kJ/m² | ISO 179/1eA |
| Izod notched impact strength, 23°C | 13 / - | kJ/m² | ISO 180/1A |
| Poisson's ratio | 0.413 / -[C] | | |

[C]: Calculated

## Thermal properties

| | dry/cond. | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 262 / * | °C | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 250 / * | °C | ISO 75-1/-2 |
| Coefficient of linear thermal expansion (CLTE), parallel | 23.6 / * | E-6/K | ISO 11359-1/-2 |
| Coefficient of linear thermal expansion (CLTE), normal | 91.2 / * | E-6/K | ISO 11359-1/-2 |

## Flammability

| | dry/cond. | | |
|---|---|---|---|
| Burning Behav. at 1.5mm nom. thickn. | HB / * | class | IEC 60695-11-10 |

## Physical/Other properties

| | dry/cond. | | |
|---|---|---|---|
| Density | 1360 / - | kg/m³ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Recommended | yes | |
| Drying Temperature | 80 | °C |
| Drying Time, Dehumidified Dryer | 2 - 4 | h |
| Processing Moisture Content | ≤0.15 | % |
| Melt Temperature Optimum | 295 | °C |
| Min. melt temperature | 285 | °C |
| Max. melt temperature | 305 | °C |
| Screw tangential speed | ≤0.2 | m/s |
| Mold Temperature Optimum | 100 | °C |
| Min. mould temperature | 70 | °C |

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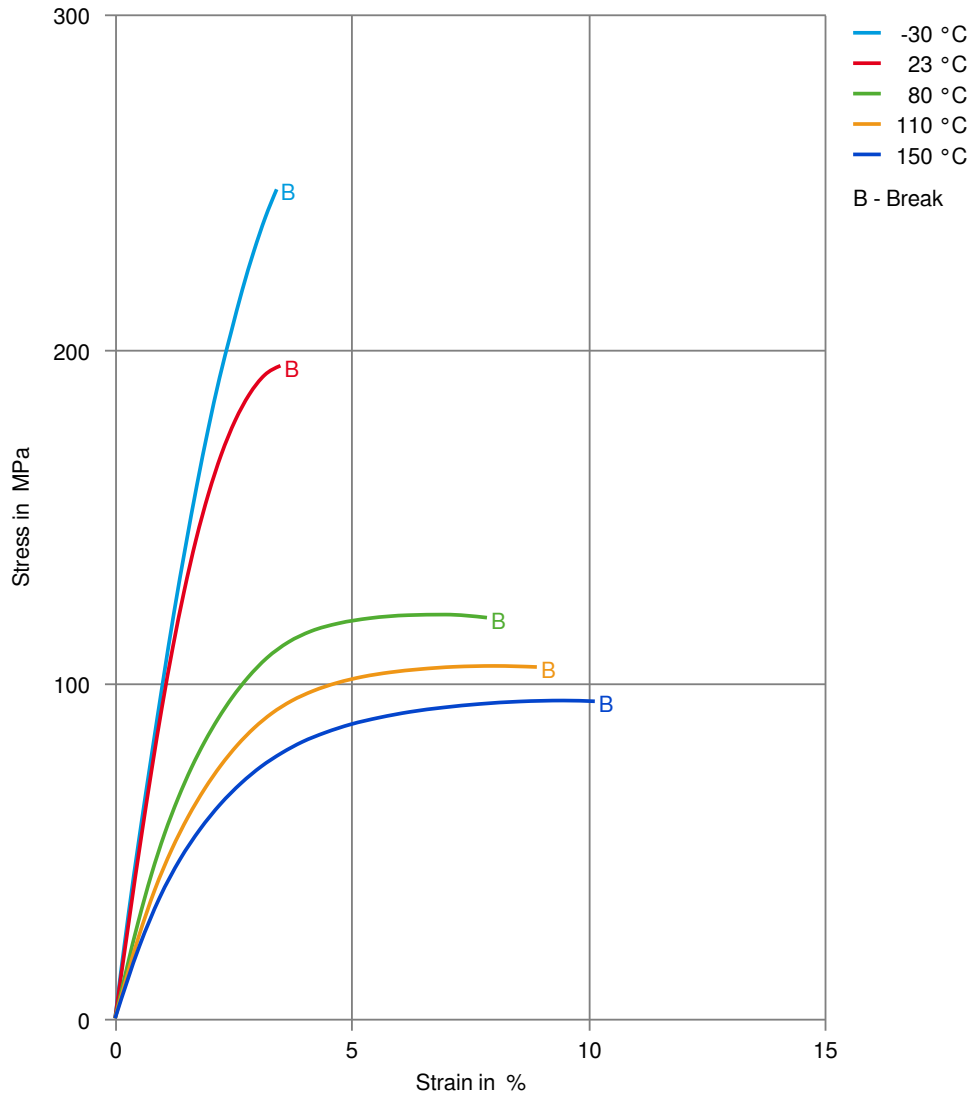
| | |
|---|---|
| Max. mould temperature | 120 °C |

## Characteristics

| | |
|---|---|
| Processing | Injection Moulding |
| Delivery form | Granules |
| Special characteristics | Heat stabilised or stable to heat, Hydrolysis resistant, Chemical resistant |

## Stress-strain (dry)



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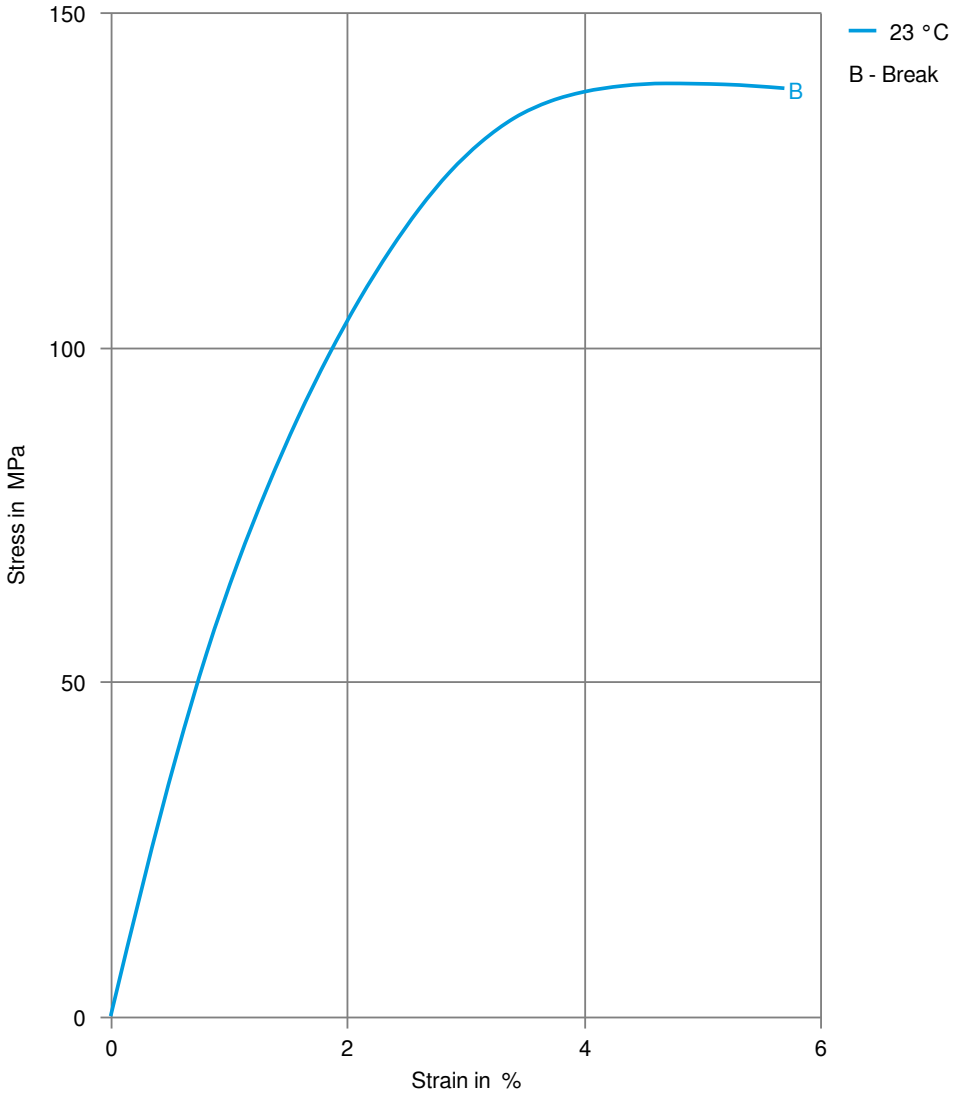
## Stress-strain (cond.)



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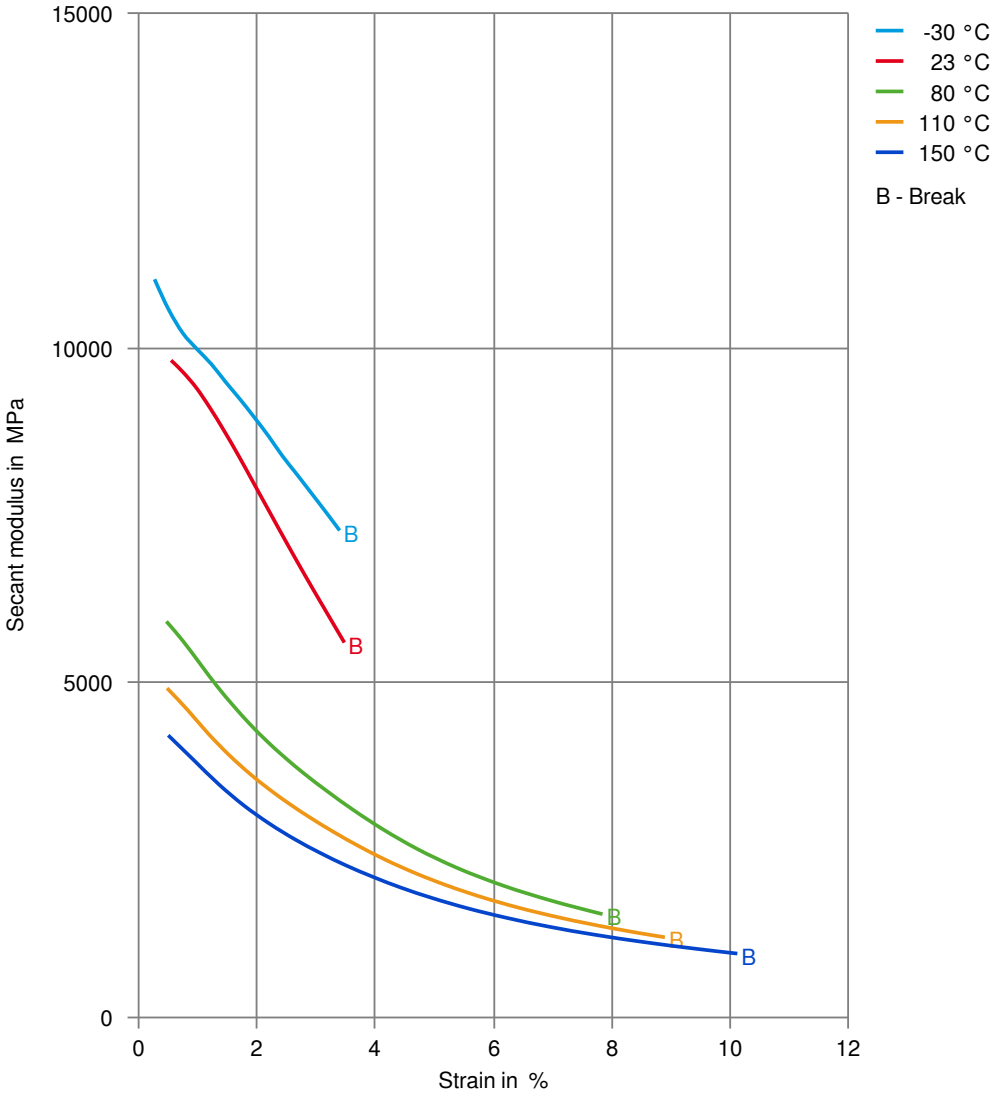
## Secant modulus-strain (dry)



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## Secant modulus-strain (cond.)