

CELANYL® A3 GF50 BK 9005/U

CELANYL®

General purpose grade for high mechanical performances.

Product information

| | | |
|--------------------------------|-------------|-------------|
| Resin Identification | PA66-GF50 | ISO 1043 |
| Part Marking Code | >PA66-GF50< | ISO 11469 |
| Continuous Service Temperature | 90 °C | IEC 60216-1 |

Rheological properties

| | | | |
|------------------------------------|-----------|--------------------|-----------------|
| | dry/cond. | | |
| Viscosity number | 135/* | cm ³ /g | ISO 307, 1628 |
| Moulding shrinkage range, parallel | 0.1 - 0.4 | % | ISO 294-4, 2577 |
| Moulding shrinkage range, normal | 0.4 - 0.7 | % | ISO 294-4, 2577 |

Typical mechanical properties

| | | | |
|---------------------------------------|-----------------------|-------------------|--------------|
| | dry/cond. | | |
| Tensile modulus | 16000/- | MPa | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 210/- | MPa | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 2.5/- | % | ISO 527-1/-2 |
| Charpy impact strength, 23°C | N/- | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 13/- | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 11.5/- | kJ/m ² | ISO 179/1eA |
| Ball indentation hardness, H 961/30 | 265/- | MPa | ISO 2039-1 |
| Poisson's ratio | 0.33/- ^[C] | | |

[C]: Calculated

Thermal properties

| | | | |
|--|-----------|----|----------------|
| | dry/cond. | | |
| Melting temperature, 10°C/min | 260/* | °C | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 245/* | °C | ISO 75-1/-2 |
| Temperature of deflection under load, 0.45 MPa | 255/* | °C | ISO 75-1/-2 |

Flammability

| | | | |
|--------------------------------------|-----------|-------|-----------------|
| | dry/cond. | | |
| Burning Behav. at 1.5mm nom. thickn. | HB/* | class | IEC 60695-11-10 |
| Burning Behav. at thickness h | HB/* | class | IEC 60695-11-10 |
| Thickness tested | 0.75/* | mm | IEC 60695-11-10 |
| UL recognition | yes/* | | UL 94 |

Electrical properties

| | | | |
|----------------------------|-----------|-------|---------------|
| | dry/cond. | | |
| Volume resistivity | 1E13/- | Ohm.m | IEC 62631-3-1 |
| Surface resistivity | */1E12 | Ohm | IEC 62631-3-2 |
| Electric strength | 22/- | kV/mm | IEC 60243-1 |
| Comparative tracking index | 500/- | | IEC 60112 |

Physical/Other properties

| | | | |
|--------------------------|-----------|-------------------|----------------|
| | dry/cond. | | |
| Humidity absorption, 2mm | 0.9/* | % | Sim. to ISO 62 |
| Water absorption, 2mm | 4/* | % | Sim. to ISO 62 |
| Density | 1570/- | kg/m ³ | ISO 1183 |

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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 |
| Max. mould temperature | 120 °C |

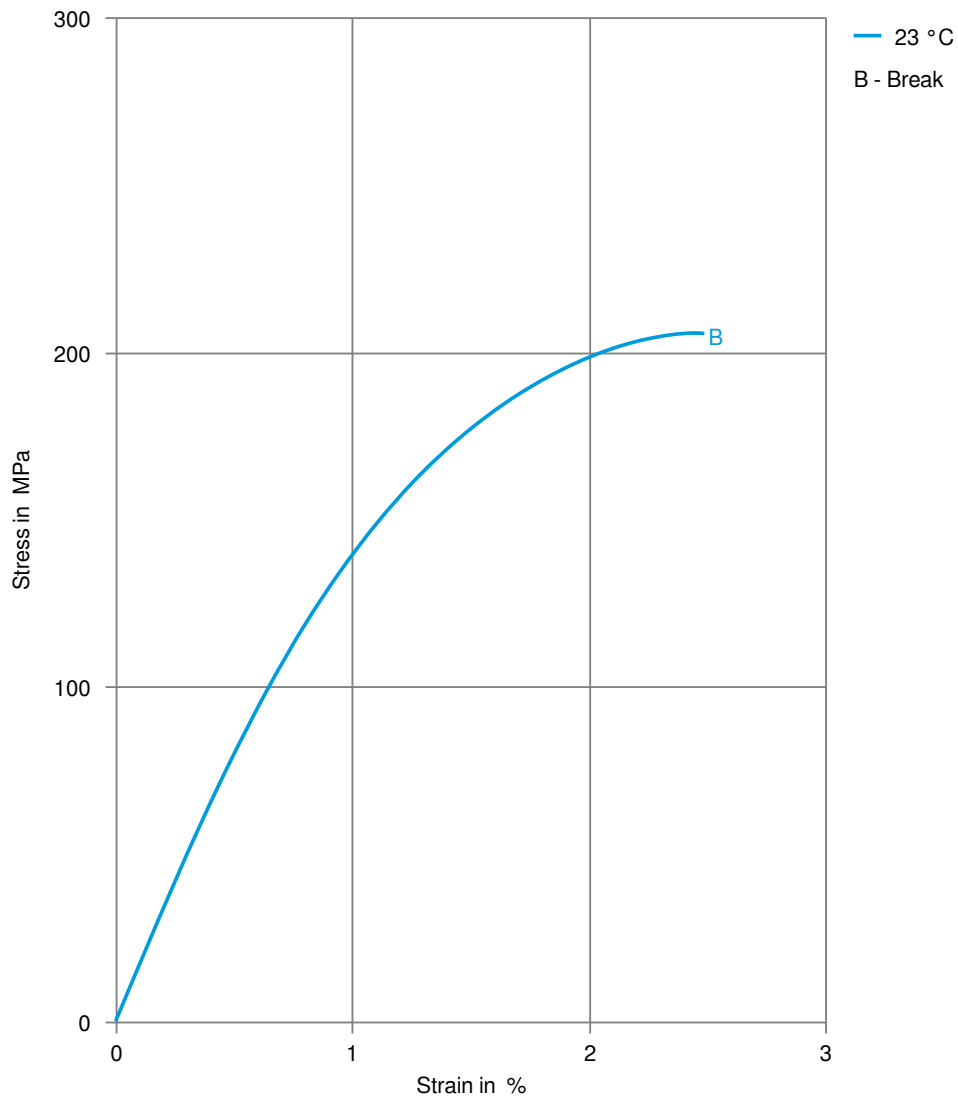
Characteristics

| | |
|-------------------------|--------------------|
| Processing | Injection Moulding |
| Delivery form | Granules |
| Special characteristics | High Flow |

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Stress-strain (dry)



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Secant modulus-strain (dry)

