

Polyamide 6

Product description

Unreinforced, toughened, PA6, performance polyamide
SenTherm 301-02 HF 1 is a high-performance, high flow thermally conductive resin for injection moulding

Product applications

SenTherm 301-02 HF 1 is a highly flowable injection moulding grade, with consistent thermal conductivity. This grade is suitable for both automotive and LEDS parts offering a cost-effective, low carbon solution for complex shapes.

Product Information

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| Resin Identification | PA6 | ISO 1043 |
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Rheological properties¹⁾

| Properties | Method | Unit | Typical Value* |
|---|------------------------|----------|----------------|
| <i>Mould shrinkage, parallel ²⁾</i> | <i>ISO 294-4, 2577</i> | <i>%</i> | <i>0.5</i> |
| <i>Mould shrinkage, transversal ²⁾</i> | <i>ISO 294-4, 2577</i> | <i>%</i> | <i>0.6</i> |

Characteristics ¹⁾

| Properties | Method | Unit | Typical Value* |
|---|-------------------|-------------------|----------------|
| Density | ISO 1183 | Kg/m ³ | 1360 |
| Melt flow rate 275°C 5kg | ISO1133/T | g/10 min | 29.5 |
| Thermal conductivity (Injection moulded) | ASTM D7984 | W/mK | 1.5 |
| Thermal conductivity (In- plane) | ISO22007 | W/mK | 5.5 |
| <i>Thermal conductivity (Compression moulded)</i> | <i>ASTM D7984</i> | <i>W/mK</i> | <i>3.0</i> |
| Tensile modulus (50mm/min) | ISO 527 | MPa | 2225 |
| Tensile strength (50mm/min) | ISO 527 | MPa | 58 |
| Strain at break | ISO 527 | % | 4 |

**Values in italics are estimated*

Characteristics ¹⁾

| Properties | Method | Unit | Typical Value* |
|-----------------------------|-------------------|--------------|----------------|
| Flexural modulus | ISO 178 | MPa | 4900 |
| <i>Charpy impact (23°C)</i> | <i>ISO 180/1A</i> | <i>kJ/m²</i> | <i>15</i> |

Injection ¹⁾

| Properties | Unit | Typical Value* |
|--------------------------------|-------|----------------|
| Drying recommended | | Yes |
| Drying temperature | °C | 80 |
| Drying time, Dehumidified oven | Hours | 4 |
| Process moisture content | % | 0.1 |
| Melt temperature | °C | 260 |
| Min melt temperature | °C | 250 |
| Max melt temperature | °C | 270 |
| Min mould temperature | °C | 70 |
| Max mould temperature | °C | 90 |
| Ejection temperature | °C | 190 |

- 1) The information stated on technical data sheets should be used as indicative only for material selection and not utilised for specifications or part and tool design.
- 2) Measurements have been estimated from moulded laboratory parts; actual shrinkage may be outside these parameters. This is dependant on mould conditions and parameters. Our recommendation is using legacy tooling before cutting on a new moulding tool.

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