

Polyphenylene/Polyamide

Product description

Modified PPE, PPE/PA alloy

SenTherm 201-01 1 is a high-performance thermally conductive resin for injection moulding

Product applications

SenTherm 201-01 1 is suitable for use in thermal management applications within automotive, offering lightweighting and thermal transfer benefits. The material can be substituted for metal parts which are non-structural.

Product Information

Resin Identification	PPE/PA	ISO 1043
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Rheological properties¹⁾

Properties	Method	Unit	Typical Value*
<i>Mould shrinkage, Parallel²⁾</i>	<i>ISO 294-4, 2577</i>	<i>%</i>	<i>0.4</i>
<i>Mould shrinkage, Transversal²⁾</i>	<i>ISO 294-4, 2577</i>	<i>%</i>	<i>0.5</i>

Characteristics¹⁾

Properties	Method	Unit	Typical Value*
Density	ISO 1183	Kg/m ³	1300
<i>Melt flow rate</i>	<i>ISO1133/T</i>	<i>g/10 min</i>	<i>-</i>
Thermal conductivity (Injection moulded)	ASTM D7984	W/mK	1.7
Thermal conductivity (Compression moulded)	ASTM D7984	W/mK	3
Tensile modulus (50mm/min)	ISO 527	MPa	1845
Tensile strength (50mm/min)	ISO 527	MPa	43
Strain at break	ISO 527	%	4

Characteristics ¹⁾

Properties	Method	Unit	Typical Value*
Flexural modulus	ISO 178	MPa	5600
<i>Charpy impact (23°C)</i>	<i>ISO 180/1A</i>	<i>kJ/m²</i>	<i>8</i>

Injection ¹⁾³⁾

Properties	Unit	Typical Value*
Drying recommended		Yes
Drying temperature	°C	100-120
Drying time, dehumidified oven	Hours	2-4
Process moisture content	%	0.1
Melt temperature	°C	290
Min melt temperature	°C	280
Max melt temperature	°C	300
Min mould temperature	°C	80
Max mould temperature	°C	120
Ejection temperature	°C	210

- 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.
- 3) It is highly recommended not to go above 300°C due to break down of the material causing degradation and smoking. Furthermore, low temperatures can lead to shear degradation and non-uniform plasticisation, whilst higher temperature cause silver streaking and degradation. Ventilation is recommended due to the phenolic smell created when processing the resin.

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***Values in italics are estimated**

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