

Polyphthalamide

Product description

Unreinforced, Toughened, PPA, High Performance Polyamide  
SenTherm 304-02 1 is a high-performance thermally conductive resin for injection moulding

Product applications

SenTherm 304-02 1 rival's metals in heat transfer, offering flexibility in complex parts with multiple features. The material can be utilised in automotive applications and high temperature applications up to 150°C. Furthermore, for highly conductive sheeting the material can be compression moulded for cooling sheets for heat exchangers and sinks

Product Information

Resin Identification	PA6T	ISO 1043
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Rheological properties <sup>1)</sup>

Properties	Method	Unit	Typical Value*
<i>Mould shrinkage, parallel <sup>2)</sup></i>	<i>ISO 294-4, 2577</i>	<i>%</i>	<i>0.4</i>
<i>Mould shrinkage, transversal <sup>2)</sup></i>	<i>ISO 294-4, 2577</i>	<i>%</i>	<i>0.5</i>

Characteristics <sup>1)</sup>

Properties	Method	Unit	Typical Value*
Density	ISO 1183	Kg/m <sup>3</sup>	1400
Melt flow rate	ISO1133/T	g/10 min	2.5
Thermal conductivity (Injection moulded)	ASTM D7984	W/mK	2.5
Thermal conductivity (Compression moulded)	ASTM D7984	W/mK	4.2
Tensile modulus (10mm/min)	ISO 527	MPa	4200
Tensile strength (10mm/min)	ISO 527	MPa	57
Strain at break	ISO 527	%	3.5

\*Values in italics are estimated

Characteristics <sup>1)</sup>

Properties	Method	Unit	Typical Value*
Flexural modulus	ISO 178	MPa	8260
<i>Charpy impact (23°C)</i>	<i>ISO 180/1A</i>	<i>kJ/m²</i>	<i>8</i>

Injection <sup>1)</sup>

Properties	Unit	Typical Value*
Drying recommended		Yes
Drying temperature	°C	100-120
Drying time, dehumidified oven	Hours	6-8
Process moisture content	%	0.1
Melt temperature	°C	330
Min melt temperature	°C	325
Max melt temperature	°C	340
Min mould temperature	°C	100
Max mould temperature	°C	130
Ejection temperature	°C	220

- 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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