

Product description

Polyphthalamide

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 rivals 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

Rheological properties ¹⁾

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

Characteristics ¹⁾

Properties	Method	Unit	Typical Value*
Density	ISO 1183	Kg/m ³	1400
<i>Melt flow rate</i>	ISO 1133/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

Characteristics¹⁾

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>	8

Injection¹⁾

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.

Disclaimer

The information provided in this document is given in good faith and is believed to be accurate and to the best of our knowledge at the time of publication. However, SenTherm makes no representations or warranties, express or implied, regarding the accuracy, completeness, or reliability of the information contained herein. All values stated are typical and should not be considered as specification limits. Actual values may vary.

SenTherm assumes no liability for the use, processing, or application of this material. It is the responsibility of the buyer to conduct independent testing and evaluation to determine the suitability of the material for its intended use. No information contained herein should be construed as granting any licence or right under any patent or intellectual property. No statement regarding potential applications of the material, which is patent pending, shall be interpreted as an inducement to infringe any patents. To the utmost extent permitted by law, SenTherm disclaims all liability for any direct, indirect, incidental, or consequential damages arising from the use of this information or the material described.