

Product description

Polyethylene

Unreinforced, toughened, low flow polyethylene
SenTherm 101-01 02 is a high-performance filled thermally conductive resin for extrusion and thermoforming.

Product applications

SenTherm 101-01 02 has been engineered for low temperature thermal management systems including but not limited to static and dynamic heat exchangers. As well as pipe extrusion, excellent elongation has enabled this material to be used in thermoforming, allowing for a first of a kind for design flexibility for engineers looking to replace metals.

Product Information

Resin Identification	MDPE	ISO 1043
----------------------	------	----------

Rheological properties¹⁾

Properties	Method	Unit	Typical Value*
<i>Mould shrinkage, parallel ²⁾</i>	<i>ISO 294-4, 2577</i>	<i>%</i>	<i>0.9</i>
<i>Mould shrinkage, transversal ²⁾</i>	<i>ISO 294-4, 2577</i>	<i>%</i>	<i>1.1</i>

Characteristics ¹⁾

Properties	Method	Unit	Typical Value*
Density	ISO 1183	Kg/m ³	980
<i>Melt flow rate 230°C @ 5kg</i>	<i>ISO1133/T</i>	<i>g/10 min</i>	<i>0.5</i>
Thermal conductivity (injection moulded)	ASTM D7984	W/mK	1.2
Thermal conductivity (compression moulded)	ASTM D7984	W/mK	3

**Values in italics are estimated*

Extrusion ¹⁾

Properties	Unit	Typical Value*
Drying recommended		Yes
Drying temperature	°C	60-80
Drying time	Hours	2-4
Process moisture content	%	0.2
Melt temperature	°C	230
Min melt temperature	°C	215
Max melt temperature	°C	250
Min roller temperature	°C	80
Max roller temperature	°C	100

- 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, depending on mould conditions and parameters. Our recommendation is to test using legacy tooling before cutting new tooling.

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.