SenTherm
101-01 02

SENERGY

Polyethylene

Product description

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 properties[1)]

Properties	Method	Unit	Typical Value*
Mould shrinkage, parallel [2)]	*ISO 294-4, 2577*	*%*	*0.9*
Mould shrinkage, transversal [2)]	*ISO 294-4, 2577*	*%*	*1.1*

Characteristics [1)]

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

Values in italics are estimated

Date: 13/03/2025

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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.

Values in italics are estimated

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