SenTherm
201-01 1

SENERGY

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

Rheological properties[1)]

Properties	Method	Unit	Typical Value*
Mould shrinkage, Parallel [2)]	*ISO 294-4, 2577*	*%*	*0.4*
Mould shrinkage, Transversal [2)]	*ISO 294-4, 2577*	*%*	*0.5*

Characteristics [1)]

Properties	Method	Unit	Typical Value*
Density	ISO 1183	Kg/m^3	*1300*
Melt flow rate	*ISO1133/T*	*g/10 min*	-
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

Values in italics are estimated

Date: 13/03/2025

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Characteristics [1)]

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

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.

Values in italics are estimated

Date: 30/01/2025