

TECHNICAL DATA SHEET

THERMOFIL®

The Dependable PPGF Solution

F420B00



Sumika Polymer Compounds

Sumitomo Chemical Group

Description

20% Short Glass Fibre Coupled Polypropylene Compound

General

Colour

• Natural

Features

- Good Mechanical Properties
- Good Impact / Strength Balance

Applications

- Automotive
- Industrial
- Domestic

Customer Approvals

WRAS Approved

Physical Properties

	Typical Value *	Test Method
Carbon Footprint	1.7 kg CO ₂ /kg	ISO 14040
Reinforcement Content	20 %	ISO 3451/A
Density (23°C)	1.05 g/cc	ISO 1183-1/A
Melt Flow Rate (230°C / 2.16kg)	4 g/10 min	ISO 1133-1/A

Mechanical Properties

	Typical Value *	Test Method
Tensile Strength (23°C)	76 MPa	ISO 527-2/1A/50
Tensile Elongation at Break (23°C)	3.5 %	ISO 527-2/1A/50
Tensile Modulus (23°C)	4,700 MPa	ISO 527-2/1A/1
Flexural Strength (23°C)	116 MPa	ISO 178/B/10
Flexural Modulus (23°C)	4,100 MPa	ISO 178/B/2
Charpy Impact Strength, Notched (23°C)	8 kJ/m ²	ISO 179-1/1eA
Charpy Impact Strength, Notched (-30°C)	6 kJ/m ²	ISO 179-1/1eA
Charpy Impact Strength, Unnotched (23°C)	45 kJ/m ²	ISO 179-1/1eU
Charpy Impact Strength, Unnotched (-30°C)	35 kJ/m ²	ISO 179-1/1eU
Heat Deflection Temperature (1.80MPa)	140 °C	ISO 75-2/A
Heat Deflection Temperature (0.45MPa)	158 °C	ISO 75-2/B

Application Related and Other Properties

	Typical Value *	Test Method
Flammability rating	HB	UL94/3.2

* Not to be used for specification work. Mechanical property tests conducted 40 - 96hrs after injection moulding, per ISO 19069-2

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Injection Moulding Guidelines ⁺

Pre-dried Ready for Use	Yes
Pre-drying Conditions (if Required)	2 - 4 hours at 70 - 90°C
Barrel Temperature Profile (typical)	
• Rear	210 °C
• Middle	220 °C
• Front	230 °C
• Nozzle	240 °C
Injection Speed	Medium to fast
Use of Back Pressure	Low
Tool Temperature Requirement	30 - 60°C
Regrind Addition (Maximum)	10% by weight

⁺ For specific guidance tailored to your application contact SPC Technical Support or consult SPC's detailed Processing Guides

Processing Safety Guidelines ⁺⁺

Maximum Barrel Temperature	280°C
Maximum Barrel Residence Time	15 minutes
Spontaneous Ignition Temperature	320°C
Disposal of Purgings and Melts	Allow to cool and recycle via responsible recyclers

⁺⁺ Do not process this material until a full review of the associated Material Safety Data Sheet has been carried out.

Storage

Store indoors under dry conditions at temperatures less than 60°C and protect from ultraviolet light.

Enquiries

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Disclaimers

General

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Tool Shrinkage

In relation to the risk of tool shrinkage, we specifically recommend you cutting a prototype tool first and checking the shrinkage figures or measuring the shrinkage of parts produced from similar tooling before cutting a series tool, as wall thickness, gate type and position, flow path ratios and process conditions may materially affect the final tool shrinkage of a component.

Carbon Footprint

Calculation of the carbon footprint is complex. For further information on the methodology used and assumptions made please refer to our website (www.sumikaeurope.com/CO2).