

TECHNICAL DATA SHEET

THERMOFIL HP®

The High Performance PPGF Solution

F811X99



Sumika Polymer Compounds

Sumitomo Chemical Group

Description

40% High Performance Short Glass Fibre Coupled Polypropylene with High Flow

General

Colour

• Black

Features

- High Flow
- Good Impact / Strength Balance
- High Heat Stabilised
- High Temperature Stiffness
- Creep Resistance

Applications

- Automotive
- Industrial

Customer Approvals

- Stellantis FTM63 0175

Physical Properties

| | Typical Value * | Test Method |
|---------------------------------|----------------------------|--------------|
| Reinforcement Content | 40 % | ISO 3451/A |
| Density (23°C) | 1.22 g/cc | ISO 1183-1/A |
| Melt Flow Rate (230°C / 2.16kg) | 10 g/10 min | ISO 1133-1/A |
| Carbon Footprint | 1.8 kg CO ₂ /kg | ISO 14040 |

Mechanical Properties

| | Typical Value * | Test Method |
|---|----------------------|-----------------|
| Tensile Strength (23°C) | 130 MPa | ISO 527-2/1A/50 |
| Tensile Elongation at Break (23°C) | 2.9 % | ISO 527-2/1A/50 |
| Tensile Modulus (23°C) | 10000 MPa | ISO 527-2/1A/1 |
| Flexural Strength (23°C) | 183 MPa | ISO 178/B/10 |
| Flexural Modulus (23°C) | 9000 MPa | ISO 178/B/2 |
| Charpy Impact Strength, Notched (23°C) | 11 kJ/m ² | ISO 179-1/1eA |
| Charpy Impact Strength, Notched (-30°C) | 10 kJ/m ² | ISO 179-1/1eA |
| Charpy Impact Strength, Unnotched (23°C) | 62 kJ/m ² | ISO 179-1/1eU |
| Charpy Impact Strength, Unnotched (-30°C) | 65 kJ/m ² | ISO 179-1/1eU |
| Heat Deflection Temperature (1.80MPa) | 155 °C | ISO 75-2/A |
| Heat Deflection Temperature (0.45MPa) | 163 °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 | 220 °C |
| • Middle | 230 °C |
| • Front | 240 °C |
| • Nozzle | 250 °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

www.sumikaeurope.com

www.sumikapna.com

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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).