

# TECHNICAL DATA SHEET



|                      |                                   |
|----------------------|-----------------------------------|
| <b>PRODUCT CODE:</b> | <b>THERMOFIL HP F910X99 Black</b> |
| <b>CATEGORY:</b>     | <b>ADVANCED ENGINEERING</b>       |

|                      |                                                                                                                                                                                                                       |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DESCRIPTION :</b> | <b>50% High Performance Glass Coupled Polypropylene with outstanding Tensile strength, impact strength and stiffness. The grade has improved retention of stiffness and creep properties at elevated temperature.</b> |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                              |                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------|
| <b>APPROVALS :</b>           |                                                                                                   |
| <b>TYPICAL APPLICATIONS:</b> | <b>Automotive and industrial. Long fibre glass PP, Glass polyamide and Glass PBT replacement.</b> |

| <b>Properties at 23°C</b>     | <b>Test Method</b> | <b>Units</b>      | <b>Value</b> |
|-------------------------------|--------------------|-------------------|--------------|
| Reinforcement Content         | Internal Method    | %                 | 50           |
| Specific Gravity (SG)         | ISO 1183           | -                 | 1.35         |
| Melt Flow Rate (MFR)          | ISO 1133           | g/10 minutes      | 3            |
| Mould Shrinkage               | Internal Method    | %                 | 0.1-1.1      |
| Flammability Resistance       | UL 94/3.2mm        | -                 | HB           |
|                               |                    |                   |              |
| Tensile Strength              | ISO 527            | MPa               | 135          |
| Elongation at Break           | ISO 527            | %                 | 2.4          |
| Tensile Modulus               | ISO 527            | GPa               | 12.6         |
| Flexural Strength             | ISO 178            | MPa               | 190          |
| Flexural Modulus              | ISO 178            | GPa               | 11.4         |
| Izod Impact notched 23°C      | ISO R180           | KJ/m <sup>2</sup> | 15           |
| Charpy Impact notched 23°C    | ISO 179/1eA        | KJ/m <sup>2</sup> | 10           |
| Charpy Impact unnotched 23°C  | ISO 179/1eU        | KJ/m <sup>2</sup> | 55           |
| Charpy Impact notched -30°C   | ISO 179/1eA        | KJ/m <sup>2</sup> | 7.5          |
| Charpy Impact unnotched -30°C | ISO 179/1eU        | KJ/m <sup>2</sup> | 56           |
| Heat Distortion Temperature   | ISO 75/0.45 MPa    | °C                | 163          |
| Heat Distortion Temperature   | ISO 75/1.8 MPa     | °C                | 154          |
|                               |                    |                   |              |
|                               |                    |                   |              |
|                               |                    |                   |              |
|                               |                    |                   |              |



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## PRE-DRYING REQUIREMENTS

|                                              | Units  | Values            |
|----------------------------------------------|--------|-------------------|
| Pre-Dried Ready For Use                      | –      | Yes               |
| Storage Life (unopened) @ 23°C/50%R.H        | Months | 6                 |
| Open Storage Time Before Pre-Drying Required | Hours  | 6                 |
| Pre-Drying Recommendation, if required       |        | 3-4 Hours at 90°C |

## PROCESSING GUIDELINES

| Processing Parameter                        | Units       | Recommendation     |
|---------------------------------------------|-------------|--------------------|
| Barrel Temperature Profile (Rear to Nozzle) | °C          | 200, 230, 240, 250 |
| Injection Speed                             |             | Medium to Fast     |
| Use of Back Pressure                        |             | Low                |
| Tool Temperature Requirement                | °C          | 30-60              |
| Regrind Addition (Maximum)                  | % by Weight | 10                 |

**SPECIALIST PROCESSING ADVICE IS AVAILABLE FROM THERMOFIL TECHNICAL DEPARTMENT**

## HEALTH & SAFETY DATA

|                                  | Units   | Recommendation                |
|----------------------------------|---------|-------------------------------|
| Maximum Barrel Residence Time    | Minutes | 15                            |
| Maximum Barrel Temperature       | °C      | 280                           |
| Spontaneous Ignition Temperature | °C      | 320                           |
| Disposal of Purgings and Melts   |         | Cooled in Water to avoid fire |

**A separate Material Safety Data Sheet is also available**

## HANDLING RECOMMENDATIONS AND DETAILS

| Packaging Code (Digit 8) | Pallet Size W x L x H (mm) | Overall Height (m) | Weight Per Pallet Net (Kg) | Description  | 2 Way or 4 Way Entry Pallets |
|--------------------------|----------------------------|--------------------|----------------------------|--------------|------------------------------|
| F                        | 1000x1200x120              | 2.0                | 1000                       | Octabin      | 4                            |
| J                        | 1000x1200x120              | 1.1                | 500                        | Half Octabin | 4                            |
| S                        | 1000x1200x120              | 1.5                | 1000                       | 20-25Kg Bags | 4                            |

|                     |                 |
|---------------------|-----------------|
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