

## Technical Data Sheet

# POLYFORT® FPP 20 GFM HI HH

Polypropylene Homopolymer  
Engineering Plastics



### Product Description

20% milled glass fibre PP homopolymer, impact modified, heat stabilized

### General

|                           |                                            |                   |                   |
|---------------------------|--------------------------------------------|-------------------|-------------------|
| Filler / Reinforcement    | • Milled Glass Fiber, 20% Filler by Weight |                   |                   |
| Additive                  | • Heat Stabilizer                          | • Impact Modifier |                   |
| Features                  | • Heat Stabilized                          | • Homopolymer     | • Impact Modified |
| Automotive Specifications | • FORD WSK-M4D731-A1 Color: Black          |                   |                   |
| Processing Method         | • Injection Molding                        |                   |                   |

| Physical                                    | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---------------------------------------------|-------------------------|--------------------|-------------|
| Density                                     | 1.07 g/cm³              | 1.07 g/cm³         | ISO 1183/A  |
| Melt Volume-Flow Rate (MVR) (230°C/2.16 kg) | 3.50 cm³/10min          | 3.50 cm³/10min     | ISO 1133    |
| Water Absorption                            |                         |                    | ISO 62      |
| Equilibrium, 73°F (23°C), 50% RH            | 0.030 %                 | 0.030 %            |             |

| Mechanical             | Nominal Value (English) | Nominal Value (SI) | Test Method     |
|------------------------|-------------------------|--------------------|-----------------|
| Tensile Modulus        | 421000 psi              | 2900 MPa           | ISO 527-2/1A/1  |
| Tensile Stress (Yield) | 4500 psi                | 31.0 MPa           | ISO 527-2/1A/50 |
| Tensile Strain         |                         |                    |                 |
| Yield                  | 6.0 %                   | 6.0 %              | ISO 527-2/1A/50 |
| Break                  | 54 %                    | 54 %               | ISO 527-2/1A/5  |

| Impact                                       | Nominal Value (English) | Nominal Value (SI) | Test Method |
|----------------------------------------------|-------------------------|--------------------|-------------|
| Charpy Notched Impact Strength (73°F (23°C)) | 3.3 ft·lb/in²           | 7.0 kJ/m²          | ISO 179/1eA |
| Charpy Unnotched Impact Strength             |                         |                    | ISO 179/1eU |
| 73°F (23°C)                                  | 14 ft·lb/in²            | 30 kJ/m²           |             |
| Notched Izod Impact (Area) (73°F (23°C))     | 4.28 ft·lb/in²          | 9.00 kJ/m²         | ASTM D256   |

| Hardness                             | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--------------------------------------|-------------------------|--------------------|-------------|
| Ball Indentation Hardness (H 358/30) | 11700 psi               | 81.0 MPa           | ISO 2039-1  |

| Thermal                       | Nominal Value (English) | Nominal Value (SI) | Test Method |
|-------------------------------|-------------------------|--------------------|-------------|
| Heat Deflection Temperature   |                         |                    |             |
| 66 psi (0.45 MPa), Unannealed | 250 °F                  | 121 °C             | ISO 75-2/Bf |
| 264 psi (1.8 MPa), Unannealed | 158 °F                  | 70.0 °C            | ISO 75-2/Af |
| Vicat Softening Temperature   | 163 °F                  | 73.0 °C            | ISO 306/B50 |

| Electrical          | Nominal Value (English) | Nominal Value (SI) | Test Method   |
|---------------------|-------------------------|--------------------|---------------|
| Surface Resistivity | > 1.0E+15 ohms          | > 1.0E+15 ohms     | IEC 60093     |
| Volume Resistivity  | > 1.0E+13 ohms·m        | > 1.0E+13 ohms·m   | IEC 62631-3-1 |

| Flammability                | Nominal Value (English) | Nominal Value (SI) | Test Method          |
|-----------------------------|-------------------------|--------------------|----------------------|
| Burning Rate                |                         |                    |                      |
| 0.0787 in (2.00 mm)         | < 3.9 in/min            | < 100 mm/min       | ISO 3795             |
| 0.0787 in (2.00 mm)         | < 3.9 in/min            | < 100 mm/min       | FMVSS 302            |
| Flammability Classification |                         |                    | IEC 60695-11-10, -20 |
| 0.06 in (1.5 mm)            | HB                      | HB                 |                      |

### Additional Information

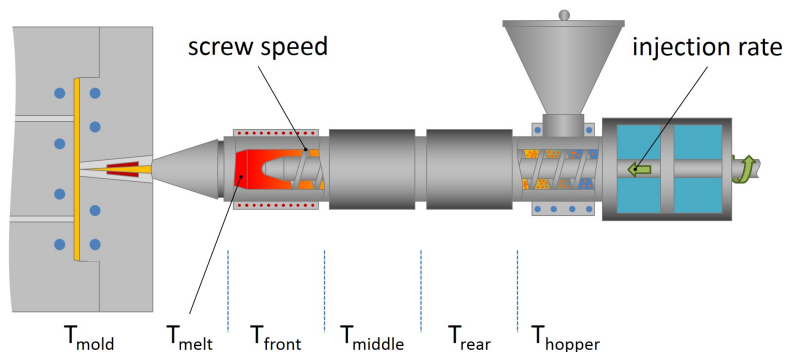
- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 176 °F                  | 80 °C              |
| Drying Time            | 2.0 to 3.0 hr           | 2.0 to 3.0 hr      |
| Suggested Max Regrind  | 20 %                    | 20 %               |
| Processing (Melt) Temp | 446 to 518 °F           | 230 to 270 °C      |
| Mold Temperature       | 104 to 158 °F           | 40 to 70 °C        |

### Injection Notes

Drying normally not necessary.

Injection molding parameters also influence emission properties, which are often required for automotive interior applications. Generally speaking, the emission, odor and fogging behavior of finished parts is improved by lowering the melt temperature, reducing residence time and avoiding high shear stress.

### Notes

These are typical property values not to be construed as specification limits.