

# POLYFORT® PPH GF30 H3 LW

Polypropylene Homopolymer  
Engineering Plastics

## Product Description

30 % glass fibre reinforced PP-Homopolymer, long term heat stabilized, laser weldable black colored

## General

|                        |                                           |                                   |  |
|------------------------|-------------------------------------------|-----------------------------------|--|
| Filler / Reinforcement | • Glass Fiber, 30% Filler by Weight       |                                   |  |
| Features               | • Chemically Coupled<br>• Heat Stabilized | • Homopolymer<br>• Laser Weldable |  |
| Processing Method      | • Injection Molding                       |                                   |  |

| Physical                                    | Nominal Value (English)     | Nominal Value (SI)          | Test Method    |
|---------------------------------------------|-----------------------------|-----------------------------|----------------|
| Density                                     | 1.13 g/cm <sup>3</sup>      | 1.13 g/cm <sup>3</sup>      | ISO 1183/A     |
| Melt Volume-Flow Rate (MVR) (230°C/2.16 kg) | 5.00 cm <sup>3</sup> /10min | 5.00 cm <sup>3</sup> /10min | ISO 1133       |
| Molding Shrinkage                           |                             |                             | ISO 294-4      |
| Across Flow                                 | 1.2 %                       | 1.2 %                       |                |
| Flow                                        | 0.30 %                      | 0.30 %                      |                |
| Mechanical                                  | Nominal Value (English)     | Nominal Value (SI)          | Test Method    |
| Tensile Modulus                             | 943000 psi                  | 6500 MPa                    | ISO 527-2/1A/1 |
| Tensile Stress (Break)                      | 12300 psi                   | 85.0 MPa                    | ISO 527-2/1A/5 |
| Tensile Strain (Break)                      | 3.0 %                       | 3.0 %                       | ISO 527-2/1A/5 |
| Flexural Modulus <sup>1</sup>               | 870000 psi                  | 6000 MPa                    | ISO 178        |
| Flexural Stress <sup>1</sup>                |                             |                             | ISO 178        |
| 3.4% Strain                                 | 18600 psi                   | 128 MPa                     |                |
| 3.6% Strain <sup>2</sup>                    | 18300 psi                   | 126 MPa                     |                |
| Impact                                      | Nominal Value (English)     | Nominal Value (SI)          | Test Method    |
| Charpy Notched Impact Strength              |                             |                             | ISO 179/1eA    |
| -22°F (-30°C)                               | 3.8 ft·lb/in <sup>2</sup>   | 8.0 kJ/m <sup>2</sup>       |                |
| 73°F (23°C)                                 | 4.3 ft·lb/in <sup>2</sup>   | 9.0 kJ/m <sup>2</sup>       |                |
| Charpy Unnotched Impact Strength            |                             |                             | ISO 179/1eU    |
| -22°F (-30°C)                               | 21 ft·lb/in <sup>2</sup>    | 45 kJ/m <sup>2</sup>        |                |
| 73°F (23°C)                                 | 23 ft·lb/in <sup>2</sup>    | 48 kJ/m <sup>2</sup>        |                |
| Hardness                                    | Nominal Value (English)     | Nominal Value (SI)          | Test Method    |
| Ball Indentation Hardness (H 358/30)        | 18600 psi                   | 128 MPa                     | ISO 2039-1     |
| Thermal                                     | Nominal Value (English)     | Nominal Value (SI)          | Test Method    |
| Heat Deflection Temperature                 |                             |                             |                |
| 66 psi (0.45 MPa), Unannealed               | 311 °F                      | 155 °C                      | ISO 75-2/Bf    |
| 264 psi (1.8 MPa), Unannealed               | 284 °F                      | 140 °C                      | ISO 75-2/af    |
| Vicat Softening Temperature                 |                             |                             |                |
| --                                          | 329 °F                      | 165 °C                      | ISO 306/A50    |
| --                                          | 266 °F                      | 130 °C                      | ISO 306/B50    |
| Ball Pressure Test (293°F (145°C))          | Pass                        | Pass                        | IEC 60695-10-2 |
| 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  |



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| Flammability                   | Nominal Value (English) | Nominal Value (SI) | Test Method          |
|--------------------------------|-------------------------|--------------------|----------------------|
| Burning Rate                   |                         |                    |                      |
| 0.0787 in (2.00 mm)            | 2.3 in/min              | 58 mm/min          | ISO 3795             |
| 0.0787 in (2.00 mm)            | 2.3 in/min              | 58 mm/min          | FMVSS 302            |
| Flammability Classification    |                         |                    | IEC 60695-11-10, -20 |
| 0.06 in (1.5 mm)               | HB                      | HB                 |                      |
| 0.12 in (3.0 mm)               | HB                      | HB                 |                      |
| Glow Wire Flammability Index   |                         |                    | IEC 60695-2-12       |
| 0.06 in (1.5 mm)               | 1380 °F                 | 750 °C             |                      |
| 0.12 in (3.0 mm)               | 1380 °F                 | 750 °C             |                      |
| Glow Wire Ignition Temperature |                         |                    | IEC 60695-2-13       |
| 0.06 in (1.5 mm)               | 1430 °F                 | 775 °C             |                      |
| 0.12 in (3.0 mm)               | 1430 °F                 | 775 °C             |                      |

Additional Information

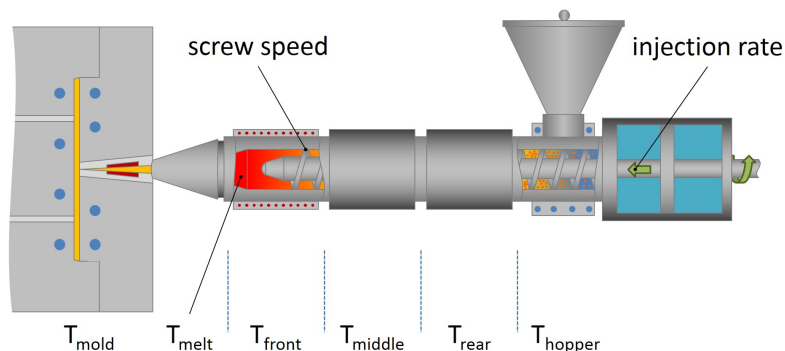
- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

Simulaton data (also for Crash simulation) is available on special request



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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.

