

## Technical Data Sheet



# Polyfort PPH MTF 2005

Polypropylene Homopolymer  
LyondellBasell Industries  
Engineering Plastics

### Product Description

Glass fiber and mineral filled PP Homopolymer

### General

|                        |                                                                         |                             |                 |
|------------------------|-------------------------------------------------------------------------|-----------------------------|-----------------|
| Material Status        | • Commercial: Active                                                    |                             |                 |
| Availability           | • Africa & Middle East<br>• Asia Pacific                                | • Europe<br>• Latin America | • North America |
| Filler / Reinforcement | • Glass Fiber, 5.0% Filler by Weight<br>• Mineral, 15% Filler by Weight |                             |                 |
| Features               | • High Strength                                                         | • Homopolymer               | • Low Warpage   |
| Processing Method      | • Injection Molding                                                     |                             |                 |

| Physical                                    | Nominal Value (English)    | Nominal Value (SI)         | Test Method          |
|---------------------------------------------|----------------------------|----------------------------|----------------------|
| Density                                     | 1.04 g/cm <sup>3</sup>     | 1.04 g/cm <sup>3</sup>     | ISO 1183/A           |
| Melt Volume-Flow Rate (MVR) (230°C/2.16 kg) | 8.0 cm <sup>3</sup> /10min | 8.0 cm <sup>3</sup> /10min | ISO 1133             |
| Mechanical                                  | Nominal Value (English)    | Nominal Value (SI)         | Test Method          |
| Tensile Modulus                             | 435000 psi                 | 3000 MPa                   | ISO 527-1/1A/1       |
| Tensile Stress                              |                            |                            | ISO 527-2/1A/50      |
| Yield                                       | 5800 psi                   | 40.0 MPa                   |                      |
| Break                                       | 5080 psi                   | 35.0 MPa                   |                      |
| Tensile Strain                              |                            |                            | ISO 527-2/1A/50      |
| Yield                                       | 40 %                       | 40 %                       |                      |
| Break                                       | 7.0 %                      | 7.0 %                      |                      |
| Flexural Modulus                            | 479000 psi                 | 3300 MPa                   | ISO 178              |
| Flexural Stress                             | 9430 psi                   | 65.0 MPa                   | ISO 178              |
| Impact                                      | Nominal Value (English)    | Nominal Value (SI)         | Test Method          |
| Charpy Notched Impact Strength              |                            |                            | ISO 179/1eA          |
| -22°F (-30°C)                               | 0.95 ft·lb/in <sup>2</sup> | 2.0 kJ/m <sup>2</sup>      |                      |
| 73°F (23°C)                                 | 1.4 ft·lb/in <sup>2</sup>  | 3.0 kJ/m <sup>2</sup>      |                      |
| Charpy Unnotched Impact Strength            |                            |                            | ISO 179/1eU          |
| -22°F (-30°C)                               | 7.1 ft·lb/in <sup>2</sup>  | 15 kJ/m <sup>2</sup>       |                      |
| 73°F (23°C)                                 | 12 ft·lb/in <sup>2</sup>   | 25 kJ/m <sup>2</sup>       |                      |
| Thermal                                     | Nominal Value (English)    | Nominal Value (SI)         | Test Method          |
| Deflection Temperature Under Load           |                            |                            |                      |
| 66 psi (0.45 MPa), Unannealed               | 284 °F                     | 140 °C                     | ISO 75-2/Bf          |
| 264 psi (1.8 MPa), Unannealed               | 185 °F                     | 85.0 °C                    | ISO 75-2/ Af         |
| Vicat Softening Temperature                 |                            |                            |                      |
| --                                          | 221 °F                     | 105 °C                     | ISO 306/B50          |
| --                                          | 311 °F                     | 155 °C                     | ISO 306/A50          |
| 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·cm          | > 1.0E+13 ohms·cm          | IEC 60093            |
| 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                         |                      |

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**Additional Information**

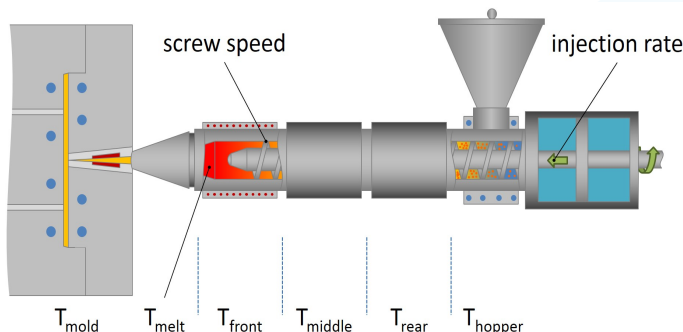
- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

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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      |
| Processing (Melt) Temp | 428 to 500 °F           | 220 to 260 °C      |
| Mold Temperature       | 86 to 140 °F            | 30 to 60 °C        |
| Injection Rate         | Moderate-Fast           | Moderate-Fast      |

### Injection Notes

Polypropylene is not hygroscopic and generally does not require drying. As a good practice and to avoid residual humidity from transport or storage conditions, we recommend drying the material.

Ensure good mold venting

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.

### Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

### Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

### Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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