

## Technical Data Sheet

**Ferrex GPP20CF21HB-NA**

Polypropylene  
LyondellBasell Industries  
Engineering Plastics

| General                                   |                                           |                        |             |
|-------------------------------------------|-------------------------------------------|------------------------|-------------|
| Material Status                           | • Commercial: Active                      |                        |             |
| Availability                              | • Latin America • North America           |                        |             |
| Filler / Reinforcement                    | • Calcium Carbonate, 22% Filler by Weight |                        |             |
| Features                                  | • High Gloss                              |                        |             |
| Appearance                                | • Natural Color                           |                        |             |
| Forms                                     | • Pellets                                 |                        |             |
| Processing Method                         | • Injection Molding                       |                        |             |
| Physical                                  | Nominal Value (English)                   | Nominal Value (SI)     | Test Method |
| Density / Specific Gravity                | 1.06                                      | 1.06 g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 15 g/10 min                               | 15 g/10 min            | ASTM D1238  |
| Mechanical                                | Nominal Value (English)                   | Nominal Value (SI)     | Test Method |
| Tensile Strength (Yield)                  | 4500 psi                                  | 31.0 MPa               | ASTM D638   |
| Tensile Elongation (Break)                | 45 %                                      | 45 %                   | ASTM D638   |
| Flexural Modulus                          | 300000 psi                                | 2070 MPa               | ASTM D790   |
| Flexural Strength (Yield)                 | 7000 psi                                  | 48.3 MPa               | ASTM D790   |
| Impact                                    | Nominal Value (English)                   | Nominal Value (SI)     | Test Method |
| Notched Izod Impact (73°F (23°C))         | 0.81 ft·lb/in                             | 43 J/m                 | ASTM D256   |
| Unnotched Izod Impact (73°F (23°C))       | 20 ft·lb/in                               | 1100 J/m               | ASTM D4812  |
| Gardner Impact                            | 65.0 in·lb                                | 7.34 J                 | ASTM D3029  |
| Hardness                                  | Nominal Value (English)                   | Nominal Value (SI)     | Test Method |
| Durometer Hardness (Shore D)              | 74                                        | 74                     | ASTM D2240  |
| Thermal                                   | Nominal Value (English)                   | Nominal Value (SI)     | Test Method |
| Deflection Temperature Under Load         |                                           |                        | ASTM D648   |
| 66 psi (0.45 MPa), Unannealed             | 240 °F                                    | 116 °C                 |             |
| 264 psi (1.8 MPa), Unannealed             | 141 °F                                    | 60.6 °C                |             |

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| Injection               | Nominal Value (English)         | Nominal Value (SI)            |
|-------------------------|---------------------------------|-------------------------------|
| Drying Temperature      | 200 °F                          | 93 °C                         |
| Drying Time             | 2.0 to 3.0 hr                   | 2.0 to 3.0 hr                 |
| Rear Temperature        | 390 to 400 °F                   | 199 to 204 °C                 |
| Middle Temperature      | 400 to 410 °F                   | 204 to 210 °C                 |
| Front Temperature       | 410 to 420 °F                   | 210 to 216 °C                 |
| Nozzle Temperature      | 420 to 430 °F                   | 216 to 221 °C                 |
| Mold Temperature        | 115 to 140 °F                   | 46 to 60 °C                   |
| Back Pressure           | 20.0 to 50.0 psi                | 0.138 to 0.345 MPa            |
| Screw Speed             | 100 to 150 rpm                  | 100 to 150 rpm                |
| Clamp Tonnage           | 2.0 to 3.0 tons/in <sup>2</sup> | 2.8 to 4.1 kN/cm <sup>2</sup> |
| Screw L/D Ratio         | 20.0:1.0                        | 20.0:1.0                      |
| Screw Compression Ratio | 2.0:1.0                         | 2.0:1.0                       |

### 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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