

## Technical Data Sheet



## Polyflam RPC 31XP GF10 FR

Polycarbonate  
LyondellBasell Industries  
Engineering Plastics

**Product Description**

Flame retardant glass fiber reinforced PC; halogen free according to DIN VDE 0472 part 815

**General**

|                   |                                          |                             |                 |
|-------------------|------------------------------------------|-----------------------------|-----------------|
| Material Status   | • Commercial: Active                     |                             |                 |
| Availability      | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Features          | • Flame Retardant<br>• Halogen Free      |                             |                 |
| Processing Method | • Injection Molding                      |                             |                 |

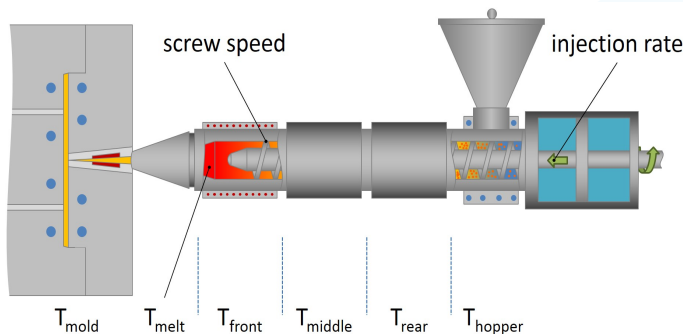
| Physical                                   | Nominal Value (English)    | Nominal Value (SI)         | Test Method     |
|--------------------------------------------|----------------------------|----------------------------|-----------------|
| Density                                    | 1.27 g/cm <sup>3</sup>     | 1.27 g/cm <sup>3</sup>     | ISO 1183/A      |
| Melt Volume-Flow Rate (MVR) (260°C/5.0 kg) | 9.0 cm <sup>3</sup> /10min | 9.0 cm <sup>3</sup> /10min | ISO 1133        |
| Mechanical                                 | Nominal Value (English)    | Nominal Value (SI)         | Test Method     |
| Tensile Modulus                            | 522000 psi                 | 3600 MPa                   | ISO 527-1/1A/1  |
| Tensile Stress                             |                            |                            |                 |
| Yield                                      | 10200 psi                  | 70.0 MPa                   | ISO 527-2/1A/50 |
| Break                                      | 9140 psi                   | 63.0 MPa                   | ISO 527-2       |
| Tensile Strain (Yield)                     | 3.5 %                      | 3.5 %                      | ISO 527-2/1A/50 |
| Nominal Tensile Strain at Break            | 6.3 %                      | 6.3 %                      | ISO 527-2       |
| Impact                                     | Nominal Value (English)    | Nominal Value (SI)         | Test Method     |
| Charpy Notched Impact Strength             |                            |                            | ISO 179/1eA     |
| -22°F (-30°C)                              | 4.3 ft·lb/in <sup>2</sup>  | 9.0 kJ/m <sup>2</sup>      |                 |
| 73°F (23°C)                                | 4.8 ft·lb/in <sup>2</sup>  | 10 kJ/m <sup>2</sup>       |                 |
| Charpy Unnotched Impact Strength           |                            |                            | ISO 179/1eU     |
| -22°F (-30°C)                              | 29 ft·lb/in <sup>2</sup>   | 60 kJ/m <sup>2</sup>       |                 |
| 73°F (23°C)                                | 24 ft·lb/in <sup>2</sup>   | 50 kJ/m <sup>2</sup>       |                 |
| Thermal                                    | Nominal Value (English)    | Nominal Value (SI)         | Test Method     |
| Deflection Temperature Under Load          |                            |                            |                 |
| 66 psi (0.45 MPa), Unannealed              | 282 °F                     | 139 °C                     | ISO 75-2/Bf     |
| 264 psi (1.8 MPa), Unannealed              | 270 °F                     | 132 °C                     | ISO 75-2/Af     |
| Vicat Softening Temperature                |                            |                            |                 |
| --                                         | 223 °F                     | 106 °C                     | ISO 306/B50     |
| --                                         | 302 °F                     | 150 °C                     | ISO 306/A50     |
| Ball Pressure Test (275°F (135°C))         | Pass                       | Pass                       | IEC 60695-10-2  |
| Flammability                               | Nominal Value (English)    | Nominal Value (SI)         | Test Method     |
| Burning Rate                               |                            |                            |                 |
| 0.0787 in (2.00 mm), Self-Extinguishing    | 0.0 in/min                 | 0.0 mm/min                 | FMVSS 302       |
| 0.0787 in (2.00 mm), Self-Extinguishing    | 0.0 in/min                 | 0.0 mm/min                 | ISO 3795        |
| Flame Rating                               |                            |                            | UL 94           |
| 0.06 in (1.5 mm)                           | V-1                        | V-1                        |                 |
| 0.12 in (3.0 mm)                           | V-0                        | V-0                        |                 |
| Glow Wire Flammability Index               |                            |                            | IEC 60695-2-12  |
| 0.12 in (3.0 mm)                           | 1760 °F                    | 960 °C                     |                 |
| Glow Wire Ignition Temperature             |                            |                            | IEC 60695-2-13  |
| 0.06 in (1.5 mm)                           | 1560 °F                    | 850 °C                     |                 |
| 0.12 in (3.0 mm)                           | 1560 °F                    | 850 °C                     |                 |

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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 212 to 248 °F           | 100 to 120 °C      |
| Drying Time            | 3.0 to 4.0 hr           | 3.0 to 4.0 hr      |
| Suggested Max Moisture | 0.02 %                  | 0.02 %             |
| Processing (Melt) Temp | 500 to 518 °F           | 260 to 270 °C      |
| Mold Temperature       | 122 to 176 °F           | 50 to 80 °C        |
| Injection Rate         | Moderate-Fast           | Moderate-Fast      |
| Back Pressure          | 725 to 1450 psi         | 5.00 to 10.0 MPa   |
| Screw Speed            | < 591 in/min            | < 15 m/min         |

### 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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