

## Technical Data Sheet



# Schuladur PCR GF 30

Polybutylene Terephthalate + PET

LyondellBasell Industries

Engineering Plastics

### Product Description

30% glass fibre reinforced PBT/PET compound based on mechanical recycled sourcing. Standard color is black, color matching for dark colors possible. Automotive structural applications are possible.

According to ISO 14021:2016 Schuladur PCR GF30 is a compound containing 30% of recycled material.

Recycled content according to DIN SPEC 91446:2021-12: R30

Data Quality Level according to DIN SPEC 91446:2021-12: DQL4

Data Quality Level according to VDA 284: DQL Automotive

### General

|                           |                                                                                                                                                                                                                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material Status           | • Commercial: Active                                                                                                                                                                                                                                                              |
| Availability              | • Africa & Middle East<br>• Asia Pacific<br>• Europe<br>• North America                                                                                                                                                                                                           |
| Filler / Reinforcement    | • Glass Fiber, 30% Filler by Weight                                                                                                                                                                                                                                               |
| Recycled Content          | • Post-Consumer (PCR), 30%                                                                                                                                                                                                                                                        |
| Automotive Specifications | • FORD WSB-M4D921-A Color: Black<br>• GM GMW15702-019101 PBT+PET-GF30 Color: 96.8001 Black<br>• GM GMW15702-019102 PBT+PET-GF30 Color: 96.8001 LS Black<br>• GM GMW15702-019103 PBT+PET-GF30 Color: 96.8082 LM Black<br>• GM GMW15702-019104 PBT+PET-GF30 Color: 96.8069 LW Black |
| UL File Number            | • E86615                                                                                                                                                                                                                                                                          |
| Processing Method         | • Injection Molding                                                                                                                                                                                                                                                               |
| Resin ID (ISO 1043)       | • (PBT+PET)-GF30                                                                                                                                                                                                                                                                  |

| Physical                                    | Nominal Value (English)        | Nominal Value (SI)             | Test Method    |
|---------------------------------------------|--------------------------------|--------------------------------|----------------|
| Density                                     | 1.55 g/cm <sup>3</sup>         | 1.55 g/cm <sup>3</sup>         | ISO 1183/A     |
| Apparent (Bulk) Density                     | 0.60 to 0.80 g/cm <sup>3</sup> | 0.60 to 0.80 g/cm <sup>3</sup> | ISO 60         |
| Melt Volume-Flow Rate (MVR) (260°C/2.16 kg) | 17 cm <sup>3</sup> /10min      | 17 cm <sup>3</sup> /10min      | ISO 1133       |
| Water Absorption                            |                                |                                | ISO 62         |
| Equilibrium, 73°F (23°C), 50% RH            | 0.30 %                         | 0.30 %                         |                |
| Mechanical                                  | Nominal Value (English)        | Nominal Value (SI)             | Test Method    |
| Tensile Modulus                             | 1.60E+6 psi                    | 11000 MPa                      | ISO 527-1/1A/1 |
| Tensile Stress (Break)                      | 20600 psi                      | 142 MPa                        | ISO 527-2/1A/5 |
| Tensile Strain (Break)                      | 2.1 %                          | 2.1 %                          | ISO 527-2/1A/5 |
| 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)                                 | 3.8 ft·lb/in <sup>2</sup>      | 8.0 kJ/m <sup>2</sup>          |                |
| Charpy Unnotched Impact Strength            |                                |                                | ISO 179/1eU    |
| -22°F (-30°C)                               | 23 ft·lb/in <sup>2</sup>       | 48 kJ/m <sup>2</sup>           |                |
| 73°F (23°C)                                 | 24 ft·lb/in <sup>2</sup>       | 50 kJ/m <sup>2</sup>           |                |
| Hardness                                    | Nominal Value (English)        | Nominal Value (SI)             | Test Method    |
| Ball Indentation Hardness (H 961/30)        | 38100 psi                      | 263 MPa                        | ISO 2039-1     |
| Thermal                                     | Nominal Value (English)        | Nominal Value (SI)             | Test Method    |
| Deflection Temperature Under Load           |                                |                                |                |
| 66 psi (0.45 MPa), Unannealed               | 437 °F                         | 225 °C                         | ISO 75-2/Bf    |
| 264 psi (1.8 MPa), Unannealed               | 392 °F                         | 200 °C                         | ISO 75-2/Af    |
| Vicat Softening Temperature                 |                                |                                |                |
| --                                          | 392 °F                         | 200 °C                         | ISO 306/B50    |
| --                                          | 421 °F                         | 216 °C                         | ISO 306/A50    |
| Ball Pressure Test (392°F (200°C))          | Pass                           | Pass                           | IEC 60695-10-2 |

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| 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        |
| Comparative Tracking Index     | 300 V                   | 300 V              | IEC 60112            |
| Flammability                   | Nominal Value (English) | Nominal Value (SI) | Test Method          |
| Burning Rate                   |                         |                    |                      |
| 0.0787 in (2.00 mm)            | 1.1 in/min              | 29 mm/min          | ISO 3795             |
| 0.0787 in (2.00 mm)            | 1.1 in/min              | 29 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)               | 1290 °F                 | 700 °C             |                      |
| 0.12 in (3.0 mm)               | 1470 °F                 | 800 °C             |                      |
| Glow Wire Ignition Temperature |                         |                    | IEC 60695-2-13       |
| 0.06 in (1.5 mm)               | 1340 °F                 | 725 °C             |                      |
| 0.12 in (3.0 mm)               | 1520 °F                 | 825 °C             |                      |
| Oxygen Index                   | 19 %                    | 19 %               | ISO 4589-2           |

### Additional Information

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

A Certificate of Analysis (CoA) is provided with every lot. DSC data is available on request. Content of not intentionally added other plastics is below 1%.

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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 248 °F                  | 120 °C             |
| Drying Time            | 4.0 to 6.0 hr           | 4.0 to 6.0 hr      |
| Suggested Max Moisture | 0.02 %                  | 0.02 %             |
| Processing (Melt) Temp | 500 to 536 °F           | 260 to 280 °C      |
| Mold Temperature       | 176 to 230 °F           | 80 to 110 °C       |
| Screw Speed            | < 709 in/min            | < 18 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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