

# LyondellBasell Lupolen® 6021 D

Easy flow, blow molding grade for small, rigid, thin-walled containers (up to 5 l), pots (up to 1 l), bottles and canisters (up to 5 l) for packaging mineral oil, antifreeze, brake fluid; drink bottles, handled containers (up to 6 l), etc.

| Physical Properties                | Metric     | English                   | Comments |
|------------------------------------|------------|---------------------------|----------|
| Density                            | 0.960 g/cc | 0.0347 lb/in <sup>3</sup> |          |
| Water Absorption                   | 0.010 %    | 0.010 %                   |          |
| Moisture Absorption at Equilibrium | 0.050 %    | 0.050 %                   |          |

|           |                                                        |                                                        |
|-----------|--------------------------------------------------------|--------------------------------------------------------|
| Melt Flow | 0.265 g/10 min<br>@Load 2.16 kg,<br>Temperature 190 °C | 0.265 g/10 min<br>@Load 4.76 lb,<br>Temperature 374 °F |
|-----------|--------------------------------------------------------|--------------------------------------------------------|

| Mechanical Properties             | Metric                | English                    | Comments |
|-----------------------------------|-----------------------|----------------------------|----------|
| Tensile Strength, Yield           | 30.0 MPa              | 4350 psi                   |          |
| Elongation at Break               | >= 50 %               | >= 50 %                    |          |
| Elongation at Yield               | 8.0 %                 | 8.0 %                      |          |
| Tensile Modulus                   | 1.40 GPa              | 203 ksi                    |          |
| Tensile Impact Strength           | 120 kJ/m <sup>2</sup> | 57.1 ft-lb/in <sup>2</sup> |          |
| Tensile Creep Modulus, 1 hour     | 510 MPa               | 74000 psi                  |          |
| Tensile Creep Modulus, 1000 hours | 340 MPa               | 49300 psi                  |          |

| Electrical Properties  | Metric                    | English                   | Comments |
|------------------------|---------------------------|---------------------------|----------|
| Electrical Resistivity | >= 1.00e+15 ohm-cm        | >= 1.00e+15 ohm-cm        |          |
| Surface Resistance     | 1.00e+14 ohm              | 1.00e+14 ohm              |          |
| Dielectric Constant    | 2.4<br>@Frequency 100 Hz  | 2.4<br>@Frequency 100 Hz  |          |
|                        | 2.4<br>@Frequency 1e+6 Hz | 2.4<br>@Frequency 1e+6 Hz |          |
| Dielectric Strength    | 150 kV/mm                 | 3810 kV/in                |          |

|                    |                               |                               |
|--------------------|-------------------------------|-------------------------------|
| Dissipation Factor | 0.00020<br>@Frequency 100 Hz  | 0.00020<br>@Frequency 100 Hz  |
|                    | 0.00020<br>@Frequency 1e+6 Hz | 0.00020<br>@Frequency 1e+6 Hz |

Comparative Tracking Index

600 V

600 V

| Thermal Properties                          | Metric                                                                                  | English                                                                                    | Comments |
|---------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------|
| CTE, linear, Parallel to Flow               | 140 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$<br>@Temperature 20.0 $^{\circ}\text{C}$ | 77.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$<br>@Temperature 68.0 $^{\circ}\text{F}$ |          |
| Melting Point                               | 135 $^{\circ}\text{C}$                                                                  | 275 $^{\circ}\text{F}$                                                                     |          |
| Deflection Temperature at 0.46 MPa (66 psi) | 84.0 $^{\circ}\text{C}$                                                                 | 183 $^{\circ}\text{F}$                                                                     |          |
| Deflection Temperature at 1.8 MPa (264 psi) | 46.0 $^{\circ}\text{C}$                                                                 | 115 $^{\circ}\text{F}$                                                                     |          |
| Vicat Softening Point                       | 80.0 $^{\circ}\text{C}$                                                                 | 176 $^{\circ}\text{F}$                                                                     |          |
| Flammability, UL94                          | HB<br>@Thickness 0.400 mm                                                               | HB<br>@Thickness 0.0157 in                                                                 |          |
| Oxygen Index                                | 17 %                                                                                    | 17 %                                                                                       |          |

