

## Technical Data Sheet

### Softflex 2701

Thermoplastic Elastomer  
LyondellBasell Industries  
Engineering Plastics

| General                                                      |                         |                         |             |
|--------------------------------------------------------------|-------------------------|-------------------------|-------------|
| Uses                                                         | • Overmolding           |                         |             |
| Physical                                                     | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Density / Specific Gravity                                   | 0.994                   | 0.992 g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) <sup>1</sup> (235°C/1.0 Kg)        | 5.0 g/10 min            | 5.0 g/10 min            | ASTM D1238  |
| Mechanical                                                   | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Taber Abrasion Resistance<br>1000 Cycles, 1000 G, H-22 Wheel | 58.9 mg                 | 58.9 mg                 | ASTM D3389  |
| Films                                                        | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Peel Strength - 90°                                          | 20 lbf/in               | 3.6 kN/m                | ASTM D429   |
| Elastomers                                                   | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Tensile Set (100% Strain)                                    | 4 %                     | 4 %                     | ASTM D412   |
| Tensile Stress                                               |                         |                         | ASTM D412   |
| 50% Strain                                                   | 218 psi                 | 1.50 MPa                |             |
| 100% Strain                                                  | 289 psi                 | 1.99 MPa                |             |
| 300% Strain                                                  | 487 psi                 | 3.36 MPa                |             |
| Tensile Strength <sup>2</sup> (Yield)                        | 1640 psi                | 11.3 MPa                | ASTM D412   |
| Tensile Elongation (Break)                                   | 870 %                   | 870 %                   | ASTM D412   |
| Tear Strength                                                | 298 lbf/in              | 52.2 kN/m               | ASTM D624   |
| Compression Set                                              |                         |                         | ASTM D395B  |
| 73°F (23°C), 22 Hr                                           | 22 %                    | 22 %                    |             |
| 158°F (70°C), 22 Hr                                          | 73 %                    | 73 %                    |             |
| 212°F (100°C), 22 Hr                                         | 89 %                    | 89 %                    |             |
| Impact                                                       | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Gardner Impact (-22°F (-30°C))                               | 239 in-lb               | 27.0 J                  | ASTM D5420  |
| Hardness                                                     | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Durometer Hardness                                           |                         |                         | ASTM D2240  |
| Shore A                                                      | 48                      | 48                      |             |
| Shore A, 10 Sec                                              | 45 to 55                | 45 to 55                |             |

| Additional Information | Nominal Value (English) | Nominal Value (SI)   |
|------------------------|-------------------------|----------------------|
| Overmold Bonding       | ABS, PC, ABS/PC, PPO    | ABS, PC, ABS/PC, PPO |

Note:

- Vapor-honed or other matte surface mold cavities (including sprue) are recommended for best mold release characteristics.
- Sprue break may be utilized to aid in sprue and runner removal.
- Sprue length should be kept as short as possible to aid sprue release.
- Heated sprue should be incorporated whenever possible.
- Excess shear heating or barrel residence time can cause delamination at gates, sticking to the tool, or material degradation.

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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 130 to 150 °F           | 54 to 66 °C        |
| Drying Time            | 4.0 to 6.0 hr           | 4.0 to 6.0 hr      |
| Rear Temperature       | 320 to 360 °F           | 160 to 182 °C      |
| Middle Temperature     | 340 to 380 °F           | 171 to 193 °C      |
| Front Temperature      | 410 to 430 °F           | 210 to 221 °C      |
| Nozzle Temperature     | 390 to 420 °F           | 199 to 216 °C      |
| Processing (Melt) Temp | 380 to 410 °F           | 193 to 210 °C      |
| Mold Temperature       | 80 to 120 °F            | 27 to 49 °C        |
| Injection Pressure     | 500 to 600 psi          | 3.45 to 4.14 MPa   |
| Holding Pressure       | 200 to 800 psi          | 1.38 to 5.52 MPa   |
| Back Pressure          | 75.0 to 150 psi         | 0.517 to 1.03 MPa  |
| Screw Speed            | 20 to 40 rpm            | 20 to 40 rpm       |

### Notes

<sup>1</sup> Procedure A

<sup>2</sup> 20 in/min (510 mm/min)