

# Keyflex® BT 1155D

Thermoplastic Copolyester Elastomer

LG Chem Ltd.

## Message:

Description

General Purpose, Medium Modulus

Application

Cable & Wire Jackets, Hose & Tubing

| General Information                                                      |                           |                   |             |
|--------------------------------------------------------------------------|---------------------------|-------------------|-------------|
| Features                                                                 | General Purpose           |                   |             |
| Uses                                                                     | Cable Jacketing           |                   |             |
|                                                                          | Hose                      |                   |             |
|                                                                          | Tubing                    |                   |             |
|                                                                          | Wire & Cable Applications |                   |             |
| Processing Method                                                        | Extrusion                 |                   |             |
|                                                                          | Injection Molding         |                   |             |
| Physical                                                                 | Nominal Value             | Unit              | Test Method |
| Specific Gravity                                                         | 1.18                      | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)                                | 14                        | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow (3.20 mm, Injection Molded)                     | 1.0 to 1.4                | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)                                           | 0.60                      | %                 | ASTM D570   |
| Hardness                                                                 | Nominal Value             | Unit              | Test Method |
| Durometer Hardness (Shore D, 23°C, Injection Molded)                     | 52                        |                   | ASTM D2240  |
| Mechanical                                                               | Nominal Value             | Unit              | Test Method |
| Tensile Strength <sup>1</sup>                                            |                           |                   | ASTM D638   |
| Yield, 23°C, 2.00 mm, Injection Molded                                   | 13.2                      | MPa               |             |
| Break, 23°C, 2.00 mm, Injection Molded                                   | 34.3                      | MPa               |             |
| Tensile Elongation <sup>2</sup> (Break, 23°C, 2.00 mm, Injection Molded) | 850                       | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (23°C, 6.40 mm, Injection Molded)          | 167                       | MPa               | ASTM D790   |
| Elastomers                                                               | Nominal Value             | Unit              | Test Method |
| Tear Strength <sup>4</sup> (23°C)                                        | 147                       | kN/m              | ASTM D624   |
| Impact                                                                   | Nominal Value             | Unit              | Test Method |
| Notched Izod Impact                                                      |                           |                   | ASTM D256   |
| -40°C, 6.40 mm, Injection Molded                                         | 250                       | J/m               |             |
| 23°C, 6.40 mm, Injection Molded                                          | No Break                  |                   |             |

| Thermal                                                                             | Nominal Value | Unit    | Test Method |
|-------------------------------------------------------------------------------------|---------------|---------|-------------|
| Deflection Temperature Under Load (0.45 MPa, Unannealed, 6.40 mm, Injection Molded) | 85.0          | °C      | ASTM D648   |
| Peak Melting Temperature                                                            | 200           | °C      | ASTM D3418  |
| Electrical                                                                          | Nominal Value | Unit    | Test Method |
| Volume Resistivity (23°C)                                                           | > 1.0E+13     | ohms·cm | ASTM D257   |
| Dielectric Strength (23°C, 1.00 mm)                                                 | 26            | kV/mm   | ASTM D149   |
| Comparative Tracking Index (Solution A)                                             | 600           | V       | IEC 60112   |
| Injection                                                                           | Nominal Value | Unit    |             |
| Drying Temperature                                                                  | 80.0 to 90.0  | °C      |             |
| Drying Time                                                                         | 3.0 to 4.0    | hr      |             |
| Suggested Max Moisture                                                              | < 0.010       | %       |             |
| Rear Temperature                                                                    | 200 to 220    | °C      |             |
| Middle Temperature                                                                  | 210 to 230    | °C      |             |
| Front Temperature                                                                   | 220 to 240    | °C      |             |
| Nozzle Temperature                                                                  | 220 to 240    | °C      |             |
| Processing (Melt) Temp                                                              | 200 to 240    | °C      |             |
| Mold Temperature                                                                    | 20.0 to 40.0  | °C      |             |
| Extrusion                                                                           | Nominal Value | Unit    |             |
| Drying Temperature                                                                  | 80.0 to 90.0  | °C      |             |
| Drying Time                                                                         | 3.0 to 4.0    | hr      |             |
| Suggested Max Moisture                                                              | < 0.010       | %       |             |
| Cylinder Zone 1 Temp.                                                               | 200 to 220    | °C      |             |
| Cylinder Zone 2 Temp.                                                               | 210 to 230    | °C      |             |
| Cylinder Zone 3 Temp.                                                               | 215 to 235    | °C      |             |
| Cylinder Zone 4 Temp.                                                               | 220 to 240    | °C      |             |
| Adapter Temperature                                                                 | 220 to 240    | °C      |             |
| Melt Temperature                                                                    | 200 to 240    | °C      |             |
| Die Temperature                                                                     | 210 to 250    | °C      |             |
| NOTE                                                                                |               |         |             |
| 1.                                                                                  | 50 mm/min     |         |             |
| 2.                                                                                  | 50 mm/min     |         |             |
| 3.                                                                                  | 15 mm/min     |         |             |
| 4.                                                                                  | 50 mm/min     |         |             |

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