

# Terluran® GP-35

Acrylonitrile Butadiene Styrene  
INEOS Styrolution Group GmbH

Message:

Terluran GP-35 is high-flow, general purpose injection molding grade with good ductility, intended for moldings with thin walls and/or adverse flow length to wall ratio.

| General Information         |                                             |                        |                     |
|-----------------------------|---------------------------------------------|------------------------|---------------------|
| UL YellowCard               | E108538-218716                              |                        |                     |
| Features                    | Ductile                                     |                        |                     |
|                             | General Purpose                             |                        |                     |
|                             | Good Colorability                           |                        |                     |
|                             | Good Impact Resistance                      |                        |                     |
|                             | Good Surface Finish                         |                        |                     |
|                             | High Flow                                   |                        |                     |
|                             | High Gloss                                  |                        |                     |
| Uses                        | Appliances                                  |                        |                     |
|                             | Automotive Applications                     |                        |                     |
|                             | General Purpose                             |                        |                     |
|                             | Household Goods                             |                        |                     |
|                             | Sanitary Products                           |                        |                     |
|                             | Telecommunications                          |                        |                     |
|                             | Thin-walled Parts                           |                        |                     |
|                             | Toys                                        |                        |                     |
|                             |                                             |                        |                     |
|                             |                                             |                        |                     |
|                             |                                             |                        |                     |
|                             |                                             |                        |                     |
|                             |                                             |                        |                     |
|                             |                                             |                        |                     |
| Forms                       | Pellets                                     |                        |                     |
| Processing Method           | Injection Molding                           |                        |                     |
| Multi-Point Data            | Isothermal Stress vs. Strain (ISO 11403-1)  |                        |                     |
|                             | Secant Modulus vs. Strain (ISO 11403-1)     |                        |                     |
|                             | Shear Modulus vs. Temperature (ISO 11403-1) |                        |                     |
|                             | Viscosity vs. Shear Rate (ISO 11403-2)      |                        |                     |
| Physical                    | Nominal Value                               | Unit                   | Test Method         |
| Specific Gravity            | 1.04                                        | g/cm <sup>3</sup>      | ASTM D792, ISO 1183 |
| Melt Mass-Flow Rate (MFR)   |                                             |                        | ASTM D1238          |
| 200°C/5.0 kg                | 3.1                                         | g/10 min               |                     |
| 220°C/10.0 kg               | 34                                          | g/10 min               |                     |
| Melt Volume-Flow Rate (MVR) |                                             |                        |                     |
| 230°C/3.8 kg                | 11.0                                        | cm <sup>3</sup> /10min | ASTM D1238          |

|                                        |               |                        |                    |
|----------------------------------------|---------------|------------------------|--------------------|
| 220°C/10.0 kg                          | 34.0          | cm <sup>3</sup> /10min | ISO 1133           |
| Molding Shrinkage                      |               |                        |                    |
| Flow                                   | 0.40 to 0.70  | %                      | ASTM D955          |
| --                                     | 0.40 to 0.70  | %                      | ISO 294-4          |
| Water Absorption                       |               |                        |                    |
| Saturation, 23°C                       | 0.95          | %                      | ASTM D570, ISO 62  |
| Equilibrium, 23°C, 50% RH              | 0.24          | %                      | ISO 62             |
| Hardness                               | Nominal Value | Unit                   | Test Method        |
| Rockwell Hardness (R-Scale)            | 102           |                        | ASTM D785          |
| Ball Indentation Hardness              | 99.0          | MPa                    | ISO 2039-1         |
| Mechanical                             | Nominal Value | Unit                   | Test Method        |
| Tensile Modulus                        |               |                        |                    |
| --                                     | 2500          | MPa                    | ASTM D638          |
| --                                     | 2300          | MPa                    | ISO 527-2          |
| Tensile Strength                       |               |                        |                    |
| Yield, 23°C                            | 45.0          | MPa                    | ASTM D638          |
| Yield, 23°C                            | 44.0          | MPa                    | ISO 527-2          |
| Tensile Strain                         |               |                        |                    |
| Yield, 23°C                            | 2.4           | %                      | ISO 527-2          |
| Break                                  | 2.4           | %                      | ASTM D638          |
| Nominal Tensile Strain at Break (23°C) | 12            | %                      | ISO 527-2          |
| Flexural Modulus                       | 2350          | MPa                    | ASTM D790          |
| Flexural Strength                      | 65.0          | MPa                    | ASTM D790, ISO 178 |
| Impact                                 | Nominal Value | Unit                   | Test Method        |
| Charpy Notched Impact Strength         |               |                        | ISO 179            |
| -30°C                                  | 7.0           | kJ/m <sup>2</sup>      |                    |
| 23°C                                   | 19            | kJ/m <sup>2</sup>      |                    |
| Charpy Unnotched Impact Strength       |               |                        | ISO 179            |
| -30°C                                  | 90            | kJ/m <sup>2</sup>      |                    |
| 23°C                                   | 130           | kJ/m <sup>2</sup>      |                    |
| Notched Izod Impact                    |               |                        |                    |
| -30°C                                  | 80            | J/m                    | ASTM D256          |
| -18°C                                  | 85            | J/m                    | ASTM D256          |
| 23°C                                   | 240           | J/m                    | ASTM D256          |
| -30°C                                  | 7.0           | kJ/m <sup>2</sup>      | ISO 180/A          |
| 23°C                                   | 22            | kJ/m <sup>2</sup>      | ISO 180/A          |
| Thermal                                | Nominal Value | Unit                   | Test Method        |
| Deflection Temperature Under Load      |               |                        |                    |
| 0.45 MPa, Unannealed                   | 88.9          | °C                     | ASTM D648          |
| 0.45 MPa, Annealed                     | 101           | °C                     | ASTM D648          |
| 0.45 MPa, Annealed                     | 95.0          | °C                     | ISO 75-2/B         |
| 1.8 MPa, Unannealed                    | 75.0          | °C                     | ASTM D648          |

| 1.8 MPa, Annealed                    | 96.7             | °C       | ASTM D648   |
|--------------------------------------|------------------|----------|-------------|
| 1.8 MPa, Annealed                    | 92.0             | °C       | ISO 75-2/A  |
| Vicat Softening Temperature          |                  |          |             |
| --                                   | 102              | °C       | ISO 306/A50 |
| --                                   | 95.0             | °C       | ISO 306/B50 |
| CLTE - Flow                          | 8.0E-5 to 1.1E-4 | cm/cm/°C | ISO 11359-2 |
| Thermal Conductivity                 | 0.17             | W/m/K    | DIN 52612   |
| Electrical                           | Nominal Value    | Unit     | Test Method |
| Volume Resistivity                   |                  |          |             |
| --                                   | > 1.0E+15        | ohms·cm  | ASTM D257   |
| --                                   | 1.0E+15          | ohms·cm  | IEC 60093   |
| Dielectric Constant (1.00 mm, 1 MHz) | 2.80             |          | ASTM D150   |
| Optical                              | Nominal Value    | Unit     | Test Method |
| Yellowness Index                     | 15               | YI       | DIN 6167    |
| Injection                            | Nominal Value    | Unit     |             |
| Drying Temperature                   | 80.0             | °C       |             |
| Drying Time                          | 2.0 to 4.0       | hr       |             |
| Processing (Melt) Temp               | 220 to 260       | °C       |             |
| Mold Temperature                     | 30.0 to 60.0     | °C       |             |
| Injection Velocity                   | 200              | mm/sec   |             |

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