

# Arnite® TV4 241 SL

Polybutylene Terephthalate

DSM Engineering Plastics

## Message:

Arnite® TV4 241 SL is a Polybutylene Terephthalate (PBT) material filled with 20% glass fiber. It is available in Asia Pacific.

Important attributes of Arnite® TV4 241 SL are:

- Flame Rated
- Flame Retardant
- UV Stabilized

| General Information              |                                  |                   |             |
|----------------------------------|----------------------------------|-------------------|-------------|
| UL YellowCard                    | E47960-240132                    |                   |             |
| Filler / Reinforcement           | Glass Fiber,20% Filler by Weight |                   |             |
| Additive                         | Flame Retardant                  |                   |             |
|                                  | UV Stabilizer                    |                   |             |
| Features                         | Flame Retardant                  |                   |             |
| Forms                            | Pellets                          |                   |             |
| Physical                         | Nominal Value                    | Unit              | Test Method |
| Density                          | 1.62                             | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption                 |                                  |                   | ISO 62      |
| Saturation, 23°C                 | 0.30                             | %                 |             |
| Equilibrium, 23°C, 50% RH        | 0.15                             | %                 |             |
| Mechanical                       | Nominal Value                    | Unit              | Test Method |
| Tensile Modulus                  | 8500                             | MPa               | ISO 527-2   |
| Tensile Stress (Break)           | 110                              | MPa               | ISO 527-2   |
| Tensile Strain (Break)           | 2.5                              | %                 | ISO 527-2   |
| Impact                           | Nominal Value                    | Unit              | Test Method |
| Charpy Notched Impact Strength   |                                  |                   | ISO 179/1eA |
| -30°C                            | 7.0                              | kJ/m <sup>2</sup> |             |
| 23°C                             | 7.0                              | kJ/m <sup>2</sup> |             |
| Charpy Unnotched Impact Strength |                                  |                   | ISO 179/1eU |
| -30°C                            | 45                               | kJ/m <sup>2</sup> |             |
| 23°C                             | 45                               | kJ/m <sup>2</sup> |             |
| Thermal                          | Nominal Value                    | Unit              | Test Method |
| Heat Deflection Temperature      |                                  |                   |             |
| 0.45 MPa, Unannealed             | 220                              | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed              | 210                              | °C                | ISO 75-2/A  |
| Melting Temperature <sup>1</sup> | 225                              | °C                | ISO 11357-3 |
| CLTE                             |                                  |                   | ISO 11359-2 |
| Flow                             | 4.0E-5                           | cm/cm/°C          |             |

| Transverse                  | 8.0E-5        | cm/cm/°C |                      |
|-----------------------------|---------------|----------|----------------------|
| Electrical                  | Nominal Value | Unit     | Test Method          |
| Volume Resistivity          | > 1.0E+15     | ohms·cm  | IEC 60093            |
| Electric Strength           | 27            | kV/mm    | IEC 60243-1          |
| Relative Permittivity       |               |          | IEC 60250            |
| 100 Hz                      | 3.90          |          |                      |
| 1 MHz                       | 3.70          |          |                      |
| Dissipation Factor          |               |          | IEC 60250            |
| 100 Hz                      | 2.0E-3        |          |                      |
| 1 MHz                       | 0.015         |          |                      |
| Comparative Tracking Index  | 250           | V        | IEC 60112            |
| Flammability                | Nominal Value | Unit     | Test Method          |
| Flammability Classification |               |          | IEC 60695-11-10, -20 |
| 1.50 mm                     | V-0           |          |                      |
| 0.750 mm                    | V-2           |          |                      |
| Injection                   | Nominal Value | Unit     |                      |
| Drying Temperature          | 100 to 120    | °C       |                      |
| Drying Time                 | 3.0 to 12     | hr       |                      |
| Rear Temperature            | 230 to 240    | °C       |                      |
| Middle Temperature          | 235 to 250    | °C       |                      |
| Front Temperature           | 240 to 255    | °C       |                      |
| Nozzle Temperature          | 240 to 260    | °C       |                      |
| Processing (Melt) Temp      | 240 to 260    | °C       |                      |
| Mold Temperature            | 60.0 to 100   | °C       |                      |
| Injection Rate              | Moderate-Fast |          |                      |
| Back Pressure               | 3.00 to 10.0  | MPa      |                      |
| Screw Compression Ratio     | 2.5:1.0       |          |                      |
| NOTE                        |               |          |                      |
| 1.                          | 10°C/min      |          |                      |

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