

# Arnite® TV4 220

Polybutylene Terephthalate

DSM Engineering Plastics

## Message:

Arnite® TV4 220 is a Polybutylene Terephthalate (PBT) material filled with 10% glass fiber. It is available in Asia Pacific or Europe. Primary attribute of Arnite® TV4 220: Flame Rated.

| General Information                   |                                             |                   |                      |
|---------------------------------------|---------------------------------------------|-------------------|----------------------|
| Filler / Reinforcement                | Glass Fiber,10% Filler by Weight            |                   |                      |
| Forms                                 | Pellets                                     |                   |                      |
| Multi-Point Data                      | Specific Heat vs. Temperature (ISO 11403-2) |                   |                      |
| Physical                              | Nominal Value                               | Unit              | Test Method          |
| Density                               | 1.37                                        | g/cm <sup>3</sup> | ISO 1183             |
| Molding Shrinkage                     |                                             |                   | ISO 294-4            |
| Across Flow                           | 1.5                                         | %                 |                      |
| Flow                                  | 0.85                                        | %                 |                      |
| Water Absorption                      |                                             |                   | ISO 62               |
| Saturation, 23°C                      | 0.35                                        | %                 |                      |
| Equilibrium, 23°C, 50% RH             | 0.16                                        | %                 |                      |
| Mechanical                            | Nominal Value                               | Unit              | Test Method          |
| Tensile Modulus                       | 4600                                        | MPa               | ISO 527-2            |
| Tensile Stress (Break)                | 90.0                                        | MPa               | ISO 527-2            |
| Tensile Strain (Break)                | 4.0                                         | %                 | ISO 527-2            |
| Impact                                | Nominal Value                               | Unit              | Test Method          |
| Charpy Notched Impact Strength        |                                             |                   | ISO 179/1eA          |
| -30°C                                 | 5.0                                         | kJ/m <sup>2</sup> |                      |
| 23°C                                  | 3.9                                         | kJ/m <sup>2</sup> |                      |
| Charpy Unnotched Impact Strength      |                                             |                   | ISO 179/1eU          |
| -30°C                                 | 30                                          | kJ/m <sup>2</sup> |                      |
| 23°C                                  | 34                                          | kJ/m <sup>2</sup> |                      |
| Thermal                               | Nominal Value                               | Unit              | Test Method          |
| Melting Temperature <sup>1</sup>      | 225                                         | °C                | ISO 11357-3          |
| CLTE                                  |                                             |                   | ISO 11359-2          |
| Flow                                  | 6.0E-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            |
| Flammability                          | Nominal Value                               | Unit              | Test Method          |
| Flammability Classification (1.50 mm) | HB                                          |                   | IEC 60695-11-10, -20 |
| 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      | 230 to 250    | °C  |
| Front Temperature       | 240 to 260    | °C  |
| Nozzle Temperature      | 240 to 260    | °C  |
| Processing (Melt) Temp  | 240 to 270    | °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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