

# Generic PEI - Glass Fiber

Polyether Imide

Generic

Message:

This data represents typical values that have been calculated from all products classified as: Generic PEI - Glass Fiber  
This information is provided for comparative purposes only.

| General Information                        |                                 |                        |             |
|--------------------------------------------|---------------------------------|------------------------|-------------|
| Filler / Reinforcement                     | Glass fiber reinforced material |                        |             |
| Physical                                   | Nominal Value                   | Unit                   | Test Method |
| Specific Gravity                           |                                 |                        |             |
| --                                         | 1.33 - 1.61                     | g/cm <sup>3</sup>      | ASTM D792   |
| 23°C                                       | 1.34 - 1.63                     | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)   | 3.1 - 14                        | g/10 min               | ASTM D1238  |
| Melt Volume-Flow Rate (MVR) (360°C/5.0 kg) | 5.00 - 12.2                     | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                          |                                 |                        |             |
| Flow: 23°C                                 | 0.19 - 0.56                     | %                      | ASTM D955   |
| Transverse flow: 23°C                      | 0.30 - 0.71                     | %                      | ASTM D955   |
| 23°C                                       | 0.10 - 0.61                     | %                      | ISO 294-4   |
| Water Absorption                           |                                 |                        |             |
| 23°C, 24 hr                                | 0.13 - 0.24                     | %                      | ASTM D570   |
| Saturated, 23°C                            | 0.79 - 1.0                      | %                      | ISO 62      |
| Equilibrium, 23°C                          | 0.90 - 1.2                      | %                      | ASTM D570   |
| Equilibrium, 23°C, 50% RH                  | 0.22 - 0.60                     | %                      | ISO 62      |
| Hardness                                   | Nominal Value                   | Unit                   | Test Method |
| Rockwell Hardness (23°C)                   | 113 - 124                       |                        | ASTM D785   |
| Ball Indentation Hardness                  | 140 - 170                       | MPa                    | ISO 2039-1  |
| Mechanical                                 | Nominal Value                   | Unit                   | Test Method |
| Tensile Modulus                            |                                 |                        |             |
| 23°C                                       | 4340 - 11900                    | MPa                    | ASTM D638   |
| 23°C                                       | 4500 - 11600                    | MPa                    | ISO 527-2   |
| Tensile Strength                           |                                 |                        |             |
| Yield, 23°C                                | 113 - 169                       | MPa                    | ASTM D638   |
| Yield, 23°C                                | 115 - 171                       | MPa                    | ISO 527-2   |
| Fracture, 23°C                             | 112 - 181                       | MPa                    | ASTM D638   |
| Fracture, 23°C                             | 115 - 180                       | MPa                    | ISO 527-2   |
| 23°C                                       | 117 - 188                       | MPa                    | ASTM D638   |
| Tensile Elongation                         |                                 |                        |             |
| Yield, 23°C                                | 1.7 - 4.1                       | %                      | ASTM D638   |
| Yield, 23°C                                | 1.9 - 5.0                       | %                      | ISO 527-2   |

|                                         |                 |                   |             |
|-----------------------------------------|-----------------|-------------------|-------------|
| Fracture, 23°C                          | 1.9 - 6.1       | %                 | ASTM D638   |
| Fracture, 23°C                          | 1.9 - 4.1       | %                 | ISO 527-2   |
| Flexural Modulus                        |                 |                   |             |
| 23°C                                    | 4720 - 12000    | MPa               | ASTM D790   |
| 23°C                                    | 4500 - 11700    | MPa               | ISO 178     |
| Flexural Strength                       |                 |                   |             |
| 23°C                                    | 148 - 271       | MPa               | ASTM D790   |
| 23°C                                    | 178 - 252       | MPa               | ISO 178     |
| Yield, 23°C                             | 159 - 241       | MPa               | ASTM D790   |
| Fracture, 23°C                          | 191 - 242       | MPa               | ASTM D790   |
| Compressive Strength (23°C)             | 124 - 214       | MPa               | ASTM D695   |
| Coefficient of Friction                 | 0.24 - 0.52     |                   | ASTM D1894  |
| Taber Abrasion Resistance (23°C)        | 15.0 - 20.4     | mg                | ASTM D1044  |
| Impact                                  | Nominal Value   | Unit              | Test Method |
| Charpy Notched Impact Strength (23°C)   | 7.0 - 11        | kJ/m <sup>2</sup> | ISO 179     |
| Charpy Unnotched Impact Strength (23°C) | 30 - 40         | kJ/m <sup>2</sup> | ISO 179     |
| Notched Izod Impact                     |                 |                   |             |
| 23°C                                    | 51 - 120        | J/m               | ASTM D256   |
| 23°C                                    | 5.0 - 14        | kJ/m <sup>2</sup> | ISO 180     |
| Unnotched Izod Impact                   |                 |                   |             |
| 23°C                                    | 420 - 710       | J/m               | ASTM D256   |
| 23°C                                    | 30 - 40         | kJ/m <sup>2</sup> | ISO 180     |
| Reverse Notch Izod Impact (23°C)        | 460             | J/m               | ASTM D256   |
| Instrumented Dart Impact                |                 |                   |             |
| 23°C                                    | 8.00 - 18.0     | J                 | ASTM D3763  |
| 23°C                                    | 2.64 - 3.70     | J                 | ISO 6603-2  |
| Thermal                                 | Nominal Value   | Unit              | Test Method |
| Deflection Temperature Under Load       |                 |                   |             |
| 0.45 MPa, not annealed                  | 210 - 213       | °C                | ASTM D648   |
| 0.45 MPa, not annealed                  | 207 - 215       | °C                | ISO 75-2/B  |
| 1.8 MPa, not annealed                   | 204 - 213       | °C                | ASTM D648   |
| 1.8 MPa, not annealed                   | 204 - 210       | °C                | ISO 75-2/A  |
| Vicat Softening Temperature             |                 |                   |             |
| --                                      | 210 - 234       | °C                | ASTM D1525  |
| --                                      | 212 - 225       | °C                | ISO 306     |
| Linear thermal expansion coefficient    |                 |                   |             |
| Flow                                    | 1.9E-5 - 3.6E-5 | cm/cm/°C          | ASTM D696   |
| Flow                                    | 1.4E-5 - 4.0E-5 | cm/cm/°C          | ASTM E831   |
| Flow                                    | 1.4E-5 - 3.1E-5 | cm/cm/°C          | ISO 11359-2 |
| Lateral                                 | 2.6E-5 - 6.2E-5 | cm/cm/°C          | ASTM E831   |
| Lateral                                 | 4.4E-5 - 6.1E-5 | cm/cm/°C          | ISO 11359-2 |
| Thermal Conductivity                    |                 |                   |             |

|                            |                   |                    |             |
|----------------------------|-------------------|--------------------|-------------|
| 23°C                       | 0.22 - 0.26       | W/m/K              | ASTM C177   |
| 23°C                       | 0.24 - 0.33       | W/m/K              | ISO 8302    |
| RTI Elec                   | 105 - 180         | °C                 | UL 746      |
| RTI Imp                    | 105 - 170         | °C                 | UL 746      |
| RTI                        | 105 - 180         | °C                 | UL 746      |
| Electrical                 | Nominal Value     | Unit               | Test Method |
| Surface Resistivity        |                   |                    |             |
| --                         | 5.0E+5 - 1.0E+17  | ohms               | ASTM D257   |
| --                         | 9.8E+14 - 1.0E+15 | ohms               | IEC 60093   |
| Volume Resistivity         |                   |                    |             |
| 23°C                       | 1.0E+3 - 1.0E+17  | ohms·cm            | ASTM D257   |
| 23°C                       | 1.0E+15 - 1.2E+15 | ohms·cm            | IEC 60093   |
| Dielectric Strength        |                   |                    |             |
| 23°C                       | 20 - 31           | kV/mm              | ASTM D149   |
| 23°C                       | 15 - 35           | kV/mm              | IEC 60243-1 |
| Dielectric Constant        |                   |                    |             |
| 23°C                       | 3.48 - 3.92       |                    | ASTM D150   |
| 23°C                       | 3.24              |                    | IEC 60250   |
| Dissipation Factor         |                   |                    |             |
| 23°C                       | 1.3E-3 - 5.3E-3   |                    | ASTM D150   |
| 23°C                       | 8.0E-4 - 5.6E-3   |                    | IEC 60250   |
| Comparative Tracking Index | 100 - 150         | V                  | IEC 60112   |
| Flammability               | Nominal Value     | Unit               | Test Method |
| Oxygen Index               |                   |                    |             |
| --                         | 47 - 54           | %                  | ASTM D2863  |
| --                         | 46 - 48           | %                  | ISO 4589-2  |
| Injection                  | Nominal Value     | Unit               |             |
| Drying Temperature         | 149 - 150         | °C                 |             |
| Drying Time                | 3.9 - 5.1         | hr                 |             |
| Drying Time, Maximum       | 24                | hr                 |             |
| Dew Point                  | -28.9             | °C                 |             |
| Hopper Temperature         | 90.0 - 100        | °C                 |             |
| Rear Temperature           | 348 - 376         | °C                 |             |
| Middle Temperature         | 359 - 369         | °C                 |             |
| Front Temperature          | 370 - 378         | °C                 |             |
| Nozzle Temperature         | 370 - 372         | °C                 |             |
| Processing (Melt) Temp     | 363 - 391         | °C                 |             |
| Mold Temperature           | 135 - 161         | °C                 |             |
| Injection Pressure         | 103 - 121         | MPa                |             |
| Back Pressure              | 0.513 - 0.521     | MPa                |             |
| Screw Speed                | 55 - 80           | rpm                |             |
| Clamp Tonnage              | 8.9 - 9.0         | kN/cm <sup>2</sup> |             |

|                        |       |    |
|------------------------|-------|----|
| Vent Depth             | 0.051 | mm |
| Injection instructions |       |    |

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