

# Xytron™ G4010T

Polyphenylene Sulfide  
DSM Engineering Plastics

Message:

Xytron™G4010T is a polyphenylene sulfide (PPS) material, which contains a 40% glass fiber reinforced material. This product is available in North America, Europe or Asia Pacific. Xytron™The main characteristics of G4010T are: flame retardant/rated flame.

| General Information                 |                                                       |       |             |
|-------------------------------------|-------------------------------------------------------|-------|-------------|
| Filler / Reinforcement              | Glass fiber reinforced material, 40% filler by weight |       |             |
| Physical                            | Nominal Value                                         | Unit  | Test Method |
| Density                             | 1.65                                                  | g/cm³ | ISO 1183    |
| Molding Shrinkage                   |                                                       |       | ISO 294-4   |
| Transverse flow                     | 0.50                                                  | %     | ISO 294-4   |
| Flow                                | 0.20                                                  | %     | ISO 294-4   |
| Water Absorption (Saturation, 23°C) | 0.020                                                 | %     | ISO 62      |
| Hardness                            | Nominal Value                                         | Unit  | Test Method |
| Rockwell Hardness                   |                                                       |       | ISO 2039-2  |
| M scale                             | 100                                                   |       | ISO 2039-2  |
| R scale                             | 121                                                   |       | ISO 2039-2  |
| Mechanical                          | Nominal Value                                         | Unit  | Test Method |
| Tensile Modulus                     |                                                       |       | ISO 527-2   |
| --                                  | 15000                                                 | MPa   | ISO 527-2   |
| 120°C                               | 7300                                                  | MPa   | ISO 527-2   |
| 160°C                               | 5200                                                  | MPa   | ISO 527-2   |
| 200°C                               | 3400                                                  | MPa   | ISO 527-2   |
| Tensile Stress                      |                                                       |       | ISO 527-2   |
| Fracture                            | 200                                                   | MPa   | ISO 527-2   |
| Fracture, 120°C                     | 105                                                   | MPa   | ISO 527-2   |
| Fracture, 160°C                     | 73.0                                                  | MPa   | ISO 527-2   |
| Fracture, 200°C                     | 55.0                                                  | MPa   | ISO 527-2   |
| Tensile Strain                      |                                                       |       | ISO 527-2   |
| Fracture                            | 2.0                                                   | %     | ISO 527-2   |
| Fracture, 120°C                     | 3.1                                                   | %     | ISO 527-2   |
| Fracture, 160°C                     | 3.9                                                   | %     | ISO 527-2   |
| Fracture, 200°C                     | 6.4                                                   | %     | ISO 527-2   |
| Flexural Modulus                    |                                                       |       | ISO 178     |
| --                                  | 14500                                                 | MPa   | ISO 178     |
| 120°C                               | 10000                                                 | MPa   | ISO 178     |
| 160°C                               | 5000                                                  | MPa   | ISO 178     |
| 200°C                               | 4200                                                  | MPa   | ISO 178     |

| Flexural Stress                                   | 300           | MPa               | ISO 178              |
|---------------------------------------------------|---------------|-------------------|----------------------|
| Impact                                            | Nominal Value | Unit              | Test Method          |
| Charpy Notched Impact Strength                    |               |                   | ISO 179/1eA          |
| -30°C                                             | 11            | kJ/m <sup>2</sup> | ISO 179/1eA          |
| 23°C                                              | 11            | kJ/m <sup>2</sup> | ISO 179/1eA          |
| Charpy Unnotched Impact Strength                  |               |                   | ISO 179/1eU          |
| -30°C                                             | 57            | kJ/m <sup>2</sup> | ISO 179/1eU          |
| 23°C                                              | 56            | kJ/m <sup>2</sup> | ISO 179/1eU          |
| Notched Izod Impact (23°C)                        | 11            | kJ/m <sup>2</sup> | ISO 180/1A           |
| Unnotched Izod Impact Strength (23°C)             | 48            | kJ/m <sup>2</sup> | ISO 180/1U           |
| Thermal                                           | Nominal Value | Unit              | Test Method          |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 260           | °C                | ISO 75-2/A           |
| Melting Temperature <sup>1</sup>                  | 280           | °C                | ISO 11357-3          |
| Linear thermal expansion coefficient              |               |                   | ISO 11359-2          |
| Flow                                              | 2.0E-5        | cm/cm/°C          | ISO 11359-2          |
| Flow <sup>2</sup>                                 | 2.5E-5        | cm/cm/°C          | ISO 11359-2          |
| Lateral                                           | 4.0E-5        | cm/cm/°C          | ISO 11359-2          |
| Lateral <sup>3</sup>                              | 8.5E-5        | cm/cm/°C          | ISO 11359-2          |
| Electrical                                        | Nominal Value | Unit              | Test Method          |
| Volume Resistivity                                | > 1.0E+15     | ohms·cm           | IEC 60093            |
| Dielectric Strength                               | 22            | kV/mm             | IEC 60243-1          |
| Comparative Tracking Index                        | 150           | V                 | IEC 60112            |
| Flammability                                      | Nominal Value | Unit              | Test Method          |
| Flammability Classification                       |               |                   | IEC 60695-11-10, -20 |
| 0.8 mm                                            | V-0           |                   | IEC 60695-11-10, -20 |
| 1.5 mm                                            | V-0           |                   | IEC 60695-11-10, -20 |
| Injection                                         | Nominal Value | Unit              |                      |
| Drying Temperature                                | 100 - 120     | °C                |                      |
| Drying Time                                       | 2.0 - 4.0     | hr                |                      |
| Rear Temperature                                  | 300 - 320     | °C                |                      |
| Middle Temperature                                | 310 - 330     | °C                |                      |
| Front Temperature                                 | 320 - 340     | °C                |                      |
| Nozzle Temperature                                | 310 - 340     | °C                |                      |
| Processing (Melt) Temp                            | 310 - 340     | °C                |                      |
| Mold Temperature                                  | 130 - 150     | °C                |                      |
| Injection Rate                                    | Moderate-Fast |                   |                      |
| Back Pressure                                     | 3.00 - 10.0   | MPa               |                      |
| Screw Compression Ratio                           | 2.5:1.0       |                   |                      |
| NOTE                                              |               |                   |                      |
| 1.                                                | 10°C/min      |                   |                      |
| 2.                                                | above Tg      |                   |                      |

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