

# Thermec N™ 4314R45H

Polyphthalamide  
Technical Polymers, LLC

Message:  
PPA, 45% Glass Fiber, Heat Stabilized  
Processing Method: Injection Molding

| General Information                               |                                                       |                   |             |
|---------------------------------------------------|-------------------------------------------------------|-------------------|-------------|
| Filler / Reinforcement                            | Glass fiber reinforced material, 45% filler by weight |                   |             |
| Additive                                          | heat stabilizer                                       |                   |             |
| Features                                          | Thermal Stability                                     |                   |             |
| Forms                                             | Particle                                              |                   |             |
| Processing Method                                 | Injection molding                                     |                   |             |
| Physical                                          | Nominal Value                                         | Unit              | Test Method |
| Density                                           | 1.58                                                  | g/cm <sup>3</sup> | ISO 1183    |
| Mechanical                                        | Nominal Value                                         | Unit              | Test Method |
| Tensile Modulus (23°C)                            | 15500                                                 | MPa               | ISO 527-2   |
| Tensile Stress (23°C)                             | 230                                                   | MPa               | ISO 527-2   |
| Tensile Strain (Break, 23°C)                      | 1.0 - 3.0                                             | %                 | ISO 527-2   |
| Impact                                            | Nominal Value                                         | Unit              | Test Method |
| Charpy Notched Impact Strength (23°C)             | 12                                                    | kJ/m <sup>2</sup> | ISO 179     |
| Thermal                                           | Nominal Value                                         | Unit              | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 280                                                   | °C                | ISO 75-2/A  |
| Melting Temperature (DSC)                         | 310                                                   | °C                | ISO 3146    |
| Electrical                                        | Nominal Value                                         | Unit              | Test Method |
| Volume Resistivity                                | > 1.0E+14                                             | ohms · cm         | ISO 3915    |
| Flammability                                      | Nominal Value                                         | Unit              | Test Method |
| Flame Rating                                      | HB                                                    |                   | UL 94       |
| Injection                                         | Nominal Value                                         | Unit              |             |
| Drying Temperature                                | 90 - 110                                              | °C                |             |
| Drying Time                                       | 4.0 - 6.0                                             | hr                |             |
| Processing (Melt) Temp                            | 325 - 345                                             | °C                |             |
| Mold Temperature                                  | 135 - 165                                             | °C                |             |

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