

## Techmer ES HiFill FR<sup>®</sup> PA6 FR HS

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Heat Stabilized , Nylon 6, Unreinforced, Flame Retardant

### Material Notes:

Availability: North America Forms: Pellets Additive: Heat Stabilizer and Lubricant Features: Flame Retardant, Lubricated and Heat Stabilized Information provided by TP Composites, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Techmer-ES-HiFill-FR-PA6-FR-HS.php](http://www.lookpolymers.com/polymer_Techmer-ES-HiFill-FR-PA6-FR-HS.php)

| Physical Properties         | Metric                            | English                            | Comments  |
|-----------------------------|-----------------------------------|------------------------------------|-----------|
| Density                     | 1.18 g/cc                         | 0.0426 lb/in <sup>3</sup>          | ASTM D792 |
| Water Absorption            | 0.95 %<br>@Time 86400 sec         | 0.95 %<br>@Time 24.0 hour          | ASTM D570 |
| Linear Mold Shrinkage, Flow | 0.012 cm/cm<br>@Thickness 3.17 mm | 0.012 in/in<br>@Thickness 0.125 in | ASTM D955 |

| Mechanical Properties   | Metric                           | English                               | Comments  |
|-------------------------|----------------------------------|---------------------------------------|-----------|
| Hardness, Rockwell R    | 112                              | 112                                   | ASTM D785 |
| Tensile Strength, Yield | 65.5 MPa                         | 9500 psi                              | ASTM D638 |
| Elongation at Break     | 20 %                             | 20 %                                  | ASTM D638 |
| Flexural Strength       | 75.8 MPa                         | 11000 psi                             | ASTM D790 |
| Flexural Modulus        | 2.00 GPa                         | 290 ksi                               | ASTM D790 |
| Izod Impact, Notched    | 0.481 J/cm<br>@Thickness 3.17 mm | 0.900 ft-lb/in<br>@Thickness 0.125 in | ASTM D256 |

| Thermal Properties                          | Metric         | English          | Comments              |
|---------------------------------------------|----------------|------------------|-----------------------|
| CTE, linear, Parallel to Flow               | 59.4 Åµm/m-Å°C | 33.0 Åµin/in-Å°F | ASTM D696             |
| Deflection Temperature at 1.8 MPa (264 psi) | 60.0 Å°C       | 140 Å°F          | Unannealed; ASTM D648 |
| Flammability, UL94                          | V-0            | V-0              |                       |

| Electrical Properties | Metric          | English         | Comments  |
|-----------------------|-----------------|-----------------|-----------|
| Volume Resistivity    | 1.00e+14 ohm-cm | 1.00e+14 ohm-cm | ASTM D257 |
| Surface Resistance    | 1.00e+12 ohm    | 1.00e+12 ohm    | ASTM D257 |

|                                              |                      |                      |                                              |
|----------------------------------------------|----------------------|----------------------|----------------------------------------------|
| Dielectric Strength<br>Electrical Properties | 20.9 kV/mm<br>Metric | 530 kV/in<br>English | Method A (Short-Time); ASTM D149<br>Comments |
|----------------------------------------------|----------------------|----------------------|----------------------------------------------|

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