

## InStruc® ETFECF15

Americhem - Ethylene Tetrafluoroethylene Copolymer

### General Information

#### Product Description

15% CARBON FIBER REINFORCED ETFE

#### General

|                        |                                                                                                      |                                                                                               |                                        |
|------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------|
| Material Status        | • Commercial: Active                                                                                 |                                                                                               |                                        |
| Availability           | • Africa & Middle East<br>• Asia Pacific                                                             | • Europe<br>• Latin America                                                                   | • North America                        |
| Filler / Reinforcement | • Carbon Fiber, 15% Filler by Weight                                                                 |                                                                                               |                                        |
| Features               | • Filled<br>• Good Dimensional Stability                                                             | • High Stiffness<br>• High Strength                                                           | • Wear Resistant                       |
| Uses                   | • Consumer Applications<br>• Electrical/Electronic Applications<br>• Engineering Parts<br>• Housings | • HVAC Applications<br>• Industrial Applications<br>• Industrial Parts<br>• Metal Replacement | • Oil/Gas Applications<br>• Pump Parts |
| Forms                  | • Pellets                                                                                            |                                                                                               |                                        |
| Processing Method      | • Injection Molding                                                                                  |                                                                                               |                                        |

### Properties <sup>1</sup>

| Physical                                                | Nominal Value    | Unit     | Test Method |
|---------------------------------------------------------|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.75             |          | ASTM D792   |
| Molding Shrinkage - Flow (0.125 in)                     | 4.0E-3 to 6.0E-3 | in/in    |             |
| Mechanical                                              | Nominal Value    | Unit     | Test Method |
| Tensile Modulus                                         | 1.50E+6          | psi      | ASTM D638   |
| Tensile Strength                                        | 7300             | psi      | ASTM D638   |
| Tensile Elongation (Yield)                              | 2.0 to 3.0       | %        | ASTM D638   |
| Flexural Modulus                                        | 1.40E+6          | psi      | ASTM D790   |
| Flexural Strength                                       | 11500            | psi      | ASTM D790   |
| Impact                                                  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact                                     | 3.3              | ft-lb/in | ASTM D256   |
| Thermal                                                 | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 400              | °F       | ASTM D648   |
| Electrical                                              | Nominal Value    | Unit     | Test Method |
| Surface Resistivity                                     | 1.0E+3 to 1.0E+7 | ohms     | ASTM D257   |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 250           | °F   |
| Drying Time            | 4.0           | hr   |
| Processing (Melt) Temp | 600           | °F   |
| Mold Temperature       | 250           | °F   |
| Back Pressure          | 50.0 to 100   | psi  |
| Screw Speed            | 40 to 70      | rpm  |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

