

# Electrafil® POM CF15

Acetal (POM) Copolymer

Techmer Engineered Solutions

## Message:

Electrafil® POM CF15 is an Acetal (POM) Copolymer product filled with 15% carbon fiber. It can be processed by injection molding and is available in North America.

Characteristics include:

Flame Rated

Copolymer

| General Information                 |                                    |                   |             |
|-------------------------------------|------------------------------------|-------------------|-------------|
| Filler / Reinforcement              | Carbon Fiber, 15% Filler by Weight |                   |             |
| Features                            | Copolymer                          |                   |             |
| Appearance                          | Black                              |                   |             |
| Forms                               | Pellets                            |                   |             |
| Processing Method                   | Injection Molding                  |                   |             |
| Physical                            | Nominal Value                      | Unit              | Test Method |
| Specific Gravity                    | 1.43                               | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)  | 0.40                               | %                 | ASTM D955   |
| Water Absorption (24 hr)            | 0.25                               | %                 | ASTM D570   |
| Hardness                            | Nominal Value                      | Unit              | Test Method |
| Rockwell Hardness (M-Scale)         | 84                                 |                   | ASTM D785   |
| Mechanical                          | Nominal Value                      | Unit              | Test Method |
| Tensile Strength (Break)            | 82.7                               | MPa               | ASTM D638   |
| Tensile Elongation (Break)          | 2.0                                | %                 | ASTM D638   |
| Flexural Modulus                    | 8270                               | MPa               | ASTM D790   |
| Flexural Strength                   | 106                                | MPa               | ASTM D790   |
| Impact                              | Nominal Value                      | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.18 mm) | 48                                 | J/m               | ASTM D256   |
| Unnotched Izod Impact (3.18 mm)     | 270                                | J/m               | ASTM D256   |
| Thermal                             | Nominal Value                      | Unit              | Test Method |
| Deflection Temperature Under Load   |                                    |                   | ASTM D648   |
| 0.45 MPa, Unannealed                | 160                                | °C                |             |
| 1.8 MPa, Unannealed                 | 149                                | °C                |             |
| CLTE - Flow                         | 3.8E-5                             | cm/cm/°C          | ASTM D696   |
| Electrical                          | Nominal Value                      | Unit              | Test Method |
| Volume Resistivity                  | 1.0E+3 to 1.0E+4                   | ohms · cm         | ASTM D257   |
| Flammability                        | Nominal Value                      | Unit              | Test Method |
| Flame Rating (1.50 mm)              | HB                                 |                   | UL 94       |
| Injection                           | Nominal Value                      | Unit              |             |
| Drying Temperature                  | 93.3                               | °C                |             |

|                        |                |     |
|------------------------|----------------|-----|
| Drying Time            | 2.0 to 3.0     | hr  |
| Rear Temperature       | 177 to 218     | °C  |
| Middle Temperature     | 177 to 218     | °C  |
| Front Temperature      | 177 to 218     | °C  |
| Processing (Melt) Temp | 193 to 213     | °C  |
| Mold Temperature       | 76.7 to 107    | °C  |
| Back Pressure          | 0.345 to 0.689 | MPa |
| Screw Speed            | 30 to 60       | rpm |

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