

# **FIT**® Preferred Heat Shrink Products

## GENERAL PURPOSE, IRRADIATED POLYOLEFIN

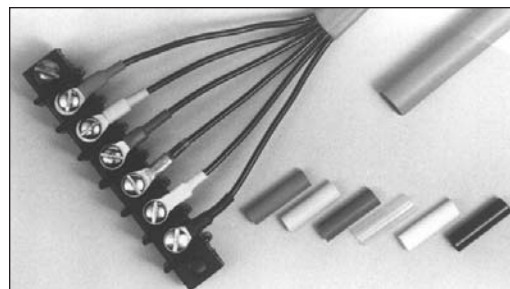
### **FIT**®-221

MIL-DTL-23053/5C,  
CLASS 1, 2  
UL STANDARD 224  
CSA STANDARD 198  
RoHS COMPLIANT

### CHOOSE **FIT**®-221 For:

- General Purpose Protection and Repair
- Identification and Beautifying Substrates
- Insulation from Environment
- Reduced Longitudinal Shrinkage
- Resistance to Water, Fungus, UV Light (black only)
- Use with **XTRA•GUARD**® 1

**2 TO 1** SHRINK RATIO



### **FIT**®-221 APPLICATIONS:

- General Purpose Insulation and Repair
- Wire and Cable Harnessing and Bundling
- Cable and Connector Protection
- Wire and Tubing Splicing and Connecting
- **XTRA•GUARD**® 1 Applications
- Automated Cutting Machines (spools)

### CHARACTERISTICS

#### OPERATING TEMPERATURE:

- -55°C to 135°C

#### SHRINKAGE RATIO:

- Approximately 2 to 1 at 121°C

#### COLOR DESCRIPTION:

- 4-Foot Lengths:
  - 3/64 to 2 Inch — Black, White, Clear, Red, Yellow, Blue, Green
  - 3 and 4 Inch — Black, Clear
- 6-Inch Lengths:
  - 3/64 to 1 Inch — Black, White, Clear, Red, Yellow, Blue, Green
  - 1-1/2 to 3 Inch — Black, Clear
- 1/2 or 1 Inch Cut Pieces: Black
- Spools: See Color Availability Chart Next Page

#### PHYSICAL PROPERTIES:

- Tensile Strength: 1500 psi, (106 kg/cm<sup>2</sup>)
- Ultimate Elongation: 200%
- Longitudinal Shrinkage: -5%
- Specific Gravity: 1.35
- Secant Modulus: 2.5 x 10<sup>4</sup> max.
- Flammability: Self-Extinguishing

#### CHEMICAL PROPERTIES:

- Corrosive Effect: Passes Copper Stability Test
- Fungus Resistance: No Growth

#### ELECTRICAL PROPERTIES:

- Dielectric Strength: 500V/mil (197 kV/cm)
- Volume Resistivity: 10<sup>14</sup> ohm-cm

### SPECIFICATIONS

- MIL-DTL-23053/5C, Class 1, 2
- UL Standard 224 (except for Clear)
- CSA Standard 198 (except for Clear)
- RoHS Compliant

 **Recognized Component**  
Underwriters Laboratories Inc.

 **Certified**  
Canadian Standards Association

 **RoHS Compliant**

#### Packaged Assortments

Assorted Sizes of 6" Lengths  
Each Length – Size Identified  
Assorted Colors

| Alpha Part No.      | Tubing Size Range          | Lengths Per Box            |
|---------------------|----------------------------|----------------------------|
| <b>FIT-221-MS-1</b> | 3/64" – 3/16"<br>(5 Sizes) | 6 per Size<br>(30 Lengths) |
| <b>FIT-221-MS-2</b> | 1/4" – 3/4"<br>(4 Sizes)   | 4 per Size<br>(16 Lengths) |

**Recommended For Use With**  
**XTRA•GUARD**® 1  
**Extra-Premium Grade PVC Jacketed**  
**General Purpose Cables**



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RoHS COMPLIANT

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## GENERAL PURPOSE, IRRADIATED POLYOLEFIN

### **FIT**®-221

| Alpha Part No.<br>And Size | Minimum<br>Supplied I.D. |        | Maximum<br>Recovered I.D. |       | Nom. Recovered<br>Wall Thickness |      | 4 Ft.<br>Lengths<br>Total Ftg. | Standard Packages |              |              | No. Cut<br>Pieces<br>6 Inch | No. Cut<br>Pieces<br>1/2" or 1" |
|----------------------------|--------------------------|--------|---------------------------|-------|----------------------------------|------|--------------------------------|-------------------|--------------|--------------|-----------------------------|---------------------------------|
|                            | Inches                   | mm     | Inches                    | mm    | Inches                           | mm   |                                | Tot.<br>Ftg.      | Tot.<br>Ftg. | Tot.<br>Ftg. |                             |                                 |
| <b>FIT-221-3/64</b>        | 0.046                    | 1,17   | 0.023                     | 0,58  | 0.016                            | 0,41 | 100                            | 1000              |              |              | 40                          | 1000                            |
| <b>FIT-221-1/16</b>        | 0.063                    | 1,60   | 0.031                     | 0,78  | 0.017                            | 0,43 | 100                            | 1000              | 100          | 70           | 36                          | 1000                            |
| <b>FIT-221-3/32</b>        | 0.093                    | 2,36   | 0.046                     | 1,17  | 0.020                            | 0,50 | 100                            | 500               | 100          | 65           | 32                          | 1000                            |
| <b>FIT-221-1/8</b>         | 0.125                    | 3,18   | 0.062                     | 1,58  | 0.020                            | 0,50 | 100                            | 500               | 100          | 60           | 28                          | 1000                            |
| <b>FIT-221-3/16</b>        | 0.187                    | 4,75   | 0.093                     | 2,36  | 0.020                            | 0,50 | 100                            | 500               | 100          | 50           | 24                          | 1000                            |
| <b>FIT-221-1/4</b>         | 0.250                    | 6,35   | 0.125                     | 3,18  | 0.025                            | 0,63 | 100                            | 250               | 100          | 40           | 20                          | 1000                            |
| <b>FIT-221-3/8</b>         | 0.375                    | 9,53   | 0.187                     | 4,75  | 0.025                            | 0,63 | 100                            | 200               | 50           | 35           | 16                          | 1000                            |
| <b>FIT-221-1/2</b>         | 0.500                    | 12,70  | 0.250                     | 6,35  | 0.025                            | 0,63 | 20                             | 150               | 50           | 32           | 14                          | -                               |
| <b>FIT-221-3/4</b>         | 0.750                    | 19,10  | 0.375                     | 9,53  | 0.030                            | 0,76 | 20                             | 250               | 50           | 24           | 12                          | -                               |
| <b>FIT-221-1</b>           | 1.000                    | 25,40  | 0.500                     | 12,70 | 0.035                            | 0,88 | 20                             | 250               | 50           | 16           | 8                           | -                               |
| <b>FIT-221-1-1/2</b>       | 1.500                    | 38,10  | 0.750                     | 19,10 | 0.040                            | 1,02 | 20                             | 125               | -            | -            | 5                           | -                               |
| <b>FIT-221-2</b>           | 2.000                    | 50,80  | 1.000                     | 25,40 | 0.045                            | 1,16 | 20                             | 125               | -            | -            | 3                           | -                               |
| <b>FIT-221-3</b>           | 3.000                    | 76,20  | 1.500                     | 38,10 | 0.050                            | 1,27 | 8                              | 100               | -            | -            | 2                           | -                               |
| <b>FIT-221-4</b>           | 4.000                    | 101,60 | 2.000                     | 50,80 | 0.055                            | 1,40 | 8                              | 50                | -            | -            | 1                           | -                               |

#### SPOOL COLOR AVAILABILITY CHART

| <b>FIT-221</b><br>Tubing Size | Put-Up | Colors       | <b>FIT-221</b><br>Tubing Size | Put-Up       | Colors       |
|-------------------------------|--------|--------------|-------------------------------|--------------|--------------|
| 3/64"                         | 1000'  | Black, Clear | 3/8"                          | 200'         | All Colors   |
| 1/16"                         | 1000'  | All Colors*  | 50'                           | Black, Clear |              |
|                               | 100'   | Black, Clear | 35'                           | All Colors   |              |
|                               | 70'    | All Colors   | 1/2"                          | 150'         | All Colors   |
| 3/32"                         | 500'   | All Colors   | 50'                           | Black, Clear |              |
|                               | 100'   | Black, Clear | 32'                           | All Colors   |              |
| 1/8"                          | 65'    | All Colors   | 3/4"                          | 250'         | All Colors   |
|                               | 500'   | All Colors   | 50'                           | Black, Clear |              |
|                               | 100'   | Black, Clear | 24"                           | All Colors   |              |
| 3/16"                         | 60'    | All Colors   | 1"                            | 250"         | All Colors   |
|                               | 500'   | All Colors   | 50"                           | Black, Clear |              |
|                               | 100'   | Black, Clear | 16"                           | All Colors   |              |
| 1/4"                          | 50'    | All Colors   | 1-1/2"                        | 125'         | Black, Clear |
|                               | 250'   | All Colors   | 2"                            | 125'         | Black, Clear |
|                               | 100'   | Black, Clear | 3"                            | 100'         | Black, Clear |
|                               | 40'    | All Colors   | 4"                            | 50'          | Black, Clear |

\*All colors include black, white, clear, red, yellow, blue, green