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Jameco Part Number 419231

## 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/cm²)
- Ultimate Elongation: 200%
- Longitudinal Shrinkage: -5%
- Specific Gravity: 1.35
- Secant Modulus:  $2.5 \times 10^4$  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:  $10^{14}$  ohm-cm

## SPECIFICATIONS

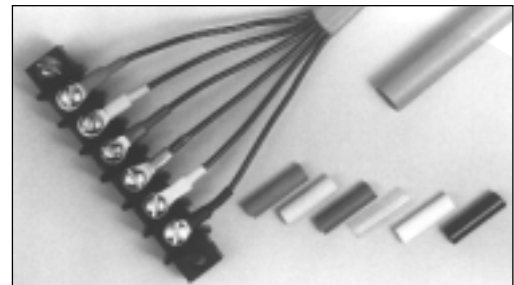
- MIL-DTL-23053/5C, Class 1, 2
- UL Standard 224 (except for Clear)
- CSA Standard 198 (except for Clear)



Underwriters Laboratories Inc.



Canadian Standards Association



### 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**

| 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<br>Spools |              | 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. |                             |                                 |
| <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       |
|-------------------------------|--------|--------------|
| 3/64"                         | 1000'  | Black, Clear |
| 1/16"                         | 1000'  | All Colors*  |
|                               | 100'   | Black, Clear |
| 3/32"                         | 70'    | All Colors   |
|                               | 500'   | All Colors   |
|                               | 100'   | Black, Clear |
|                               | 65'    | All Colors   |
| 1/8"                          | 500'   | All Colors   |
|                               | 100'   | Black, Clear |
|                               | 60'    | All Colors   |
| 3/16"                         | 500'   | All Colors   |
|                               | 100'   | Black, Clear |
|                               | 50'    | All Colors   |
| 1/4"                          | 250'   | All Colors   |
|                               | 100'   | Black, Clear |
|                               | 40'    | All Colors   |

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

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

**SEE PAGE 116  
FOR  
ECONOMICAL BULK PACKAGES!**

# **FIT**® Preferred Heat Shrink Products

## ECONOMICAL **FIT**®-221 BULK PKGS., IRRADIATED POLYOLEFIN

### **FIT**®-221B

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

## CHOOSE **FIT**®-221B 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

## **FIT**®-221B 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:

- All Bulk Packages: Black, Clear

### 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)

**UL** Recognized Component  
Underwriters Laboratories Inc.

**CSA** Certified  
Canadian Standards Association

| Alpha Part No. and Size | Minimum Supplied I.D. |       | Maximum Rec. I.D. |       | Nom. Rec. Wall Thickness |      | NEW BULK PACKAGES |                  |               |             |
|-------------------------|-----------------------|-------|-------------------|-------|--------------------------|------|-------------------|------------------|---------------|-------------|
|                         |                       |       |                   |       |                          |      | SPOOLS            |                  | 4 FT. LENGTHS |             |
|                         | Inches                | mm    | Inches            | mm    | Inches                   | mm   | Qty. in Box       | Total Spool Size | Total Ftg.    | No. of Pcs. |
| <b>FIT-221B-3/64</b>    | 0.046                 | 1,17  | 0.023             | 0,58  | 0.016                    | 0,41 | 3x1000            | 3000             | 250x4         | 1000        |
| <b>FIT-221B-1/16</b>    | 0.063                 | 1,60  | 0.031             | 0,78  | 0.017                    | 0,43 | 3x1000            | 3000             | 250x4         | 1000        |
| <b>FIT-221B-3/32</b>    | 0.093                 | 2,36  | 0.046             | 1,17  | 0.020                    | 0,50 | 3x500             | 1500             | 250x4         | 1000        |
| <b>FIT-221B-1/8</b>     | 0.125                 | 3,18  | 0.062             | 1,58  | 0.020                    | 0,50 | 3x500             | 1500             | 250x4         | 1000        |
| <b>FIT-221B-3/16</b>    | 0.187                 | 4,75  | 0.093             | 2,36  | 0.020                    | 0,50 | 2x500             | 1000             | 250x4         | 1000        |
| <b>FIT-221B-1/4</b>     | 0.250                 | 6,35  | 0.125             | 3,18  | 0.025                    | 0,63 | 2x250             | 500              | 250x4         | 1000        |
| <b>FIT-221B-3/8</b>     | 0.375                 | 9,53  | 0.187             | 4,75  | 0.025                    | 0,63 | 2x200             | 400              | 250x4         | 1000        |
| <b>FIT-221B-1/2</b>     | 0.500                 | 12,70 | 0.250             | 6,35  | 0.025                    | 0,63 | 2x150             | 300              | 200x4         | 800         |
| <b>FIT-221B-3/4</b>     | 0.750                 | 19,10 | 0.375             | 9,53  | 0.030                    | 0,76 | 1x250             | 250              | 125x4         | 500         |
| <b>FIT-221B-1</b>       | 1.000                 | 25,40 | 0.500             | 12,70 | 0.035                    | 0,88 | 1x250             | 250              | 75x4          | 300         |

**2 TO 1** SHRINK RATIO

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



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