## DUNBAR

## FEP1. 3

## 1.3:1 SHRINK RATIO, FLUORINATED ETHYLENE PROPYLENE TUBING

## Applications

FEP1.3 is a flame retardant fluorinated ethylene propylene tube. The FEP1.3 works wells as a protective sleeving and can be used to thoroughly encapsulate parts if required. It has a normal shrink ratio with a heavy wall.

## Features

$\star$ In stock for immediate shipments
$\star$ Shrink ratio: $1.3: 1$ shrink ratio in radial direction, $\pm 15 \%$ in the axial direction
$\star$ Continuous operating temperature: $-100^{\circ} \mathrm{C}$ to $200^{\circ} \mathrm{C}$
$\star$ Highly heat-resistant
$\star$ High resistance to chemicals and oils

## Standard

* MIL-DTL-23053/11 Class 1
$\star$ RoHS Compliant


## Specification Values

| Property |  | Test Method | Value |
| :---: | :---: | :---: | :---: |
| Physical | Specific Gravity | ASTM D792 | 2.13-2.17 |
|  | Elongation | ASTM D638 | 250-330\% |
|  | Tensile Strength | ASTM D638 | 2800-5000 psi |
|  | Flexural Strength | ASTM D790 | No break |
|  | Compressive Strength | ASTM D695 | 2000 psi |
|  | Flexural Modulus | ASTM D790 | 78000-92000 psi |
|  | Hardness Durometer | ASTM D636 | D-55 |
|  | Abrasion Resistance | Taber | 14-20 (1000 revs) |
| Electrical | Dielectric Strength | ASTM D149 | 500 (125 MIL) |
|  |  | ASTM D149 | $\geq 1400$ ( 10 MIL ) |
|  | Volume Resistivity | ASTM D257 | $>10^{18} \Omega-\mathrm{cm}$ |
|  | Surface Resistivity | ASTM D257 | $>10^{17} \Omega-\mathrm{cm}$ |
| General | Chemical/Solvent Resistance | ASTM D543 | No corrosion |
|  | Water Absorption | ASTM D570 | <0.01 |
|  | Deformation Under Load | ASTM D621 | No growth |
|  | Flammability Rating | UL 94 | VO |

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Fully recovered after heating
Product Dimensions Minimum Shrink Temperature: $210^{\circ} \mathrm{C}$ (over 1" Dia: $221^{\circ} \mathrm{C}$ )

| Size |  | ed | Recovered |  |  |  | 23053/11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Internal Diameter (min.) (D) |  | Internal Diameter (max.) <br> (d) |  | Total Wall Thickness <br> (t) |  |  |
| AWG Size | In. | mm | In. | mm | In. | mm | Class 1 |
| 24 | . 031 | . 787 | . 027 | . 686 | . $008 \pm .002$ | . $203 \pm .051$ | 101 |
| 22 | . 036 | . 914 | . 032 | . 813 | . $008 \pm .002$ | . $203 \pm .051$ | 102 |
| 20 | . 045 | 1.14 | . 039 | . 991 | . $008 \pm .002$ | . $203 \pm .051$ | 103 |
| 18 | . 060 | 1.52 | . 049 | 1.25 | . $008 \pm .002$ | . $203 \pm .051$ | 104 |
| 16 | . 075 | 1.91 | . 061 | 1.55 | . $009 \pm .002$ | . $229 \pm .051$ | 105 |
| 14 | . 092 | 2.34 | . 072 | 1.83 | . $009 \pm .002$ | . $229 \pm .051$ | 106 |
| 12 | . 115 | 2.92 | . 089 | 2.26 | . $009 \pm .002$ | . $229 \pm .051$ | 107 |
| 10 | . 141 | 3.58 | . 114 | 2.90 | . $010 \pm .003$ | . $254 \pm .076$ | 108 |
| 9 | . 158 | 4.01 | . 124 | 3.15 | . $010 \pm .003$ | . $254 \pm .076$ | 109 |
| 8 | . 180 | 4.57 | . 143 | 3.63 | . $010 \pm .003$ | . $254 \pm .076$ | 110 |
| 7 | . 197 | 5.00 | . 158 | 4.01 | . $011 \pm .004$ | . $279 \pm .102$ | 111 |
| 6 | . 225 | 5.72 | . 180 | 4.57 | . $011 \pm .004$ | . $279 \pm .102$ | 112 |
| 5 | . 248 | 6.30 | . 198 | 5.03 | . $011 \pm .004$ | . $279 \pm .102$ | 113 |
| 4 | . 290 | 7.37 | . 226 | 5.75 | . $011 \pm .004$ | . $279 \pm .102$ | 114 |
| 3 | . 310 | 7.87 | . 249 | 6.32 | . $011 \pm .004$ | . $279 \pm .102$ | 115 |
| 2 | . 365 | 9.27 | . 280 | 7.11 | . $012 \pm .004$ | . $305 \pm 102$ | 116 |
| 1 | . 400 | 10.16 | . 311 | 7.90 | . $012 \pm .004$ | . $305 \pm 102$ | 117 |
| 0 | . 440 | 11.18 | . 349 | 8.86 | . $012 \pm .004$ | . $305 \pm 102$ | 118 |
| Fractional Size |  |  |  |  |  |  |  |
| 3/8" | . 500 | 12.70 | . 383 | 9.73 | . $015 \pm .004$ | . $381 \pm .102$ | 119 |
| 7/16" | . 580 | 14.73 | . 448 | 11.38 | . $020 \pm .004$ | . $508 \pm .102$ | 120 |
| 1/2" | . 666 | 16.92 | . 510 | 12.95 | . $020 \pm .004$ | . $508 \pm .102$ | 121 |
| 5/8" | . 830 | 21.08 | . 637 | 16.18 | . $025 \pm .004$ | . $635 \pm .102$ | 122 |
| 3/4" | 1.000 | 25.40 | . 764 | 19.41 | . $030 \pm .004$ | . $762 \pm .102$ | 123 |
| 7/8" | 1.170 | 29.72 | . 891 | 22.63 | . $035 \pm .004$ | . $889 \pm .102$ | 124 |
| 1" | 1.330 | 33.72 | 1.020 | 25.91 | . $035 \pm .004$ | . $889 \pm .102$ | 126 |
| 1-1/8" | 1.500 | 38.10 | 1.145 | 29.08 | . $035 \pm .004$ | $889 \pm .102$ | - |
| 1-1/4" | 1.666 | 42.32 | 1.270 | 32.26 | . $035 \pm .004$ | $889 \pm .102$ | - |
| 1-3/8" | 1.833 | 46.56 | 1.390 | 35.31 | . $035 \pm .004$ | $889 \pm .102$ | - |
| 1-1/2" | 2.000 | 50.80 | 1.520 | 38.61 | . $035 \pm .004$ | $889 \pm .102$ | - |

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