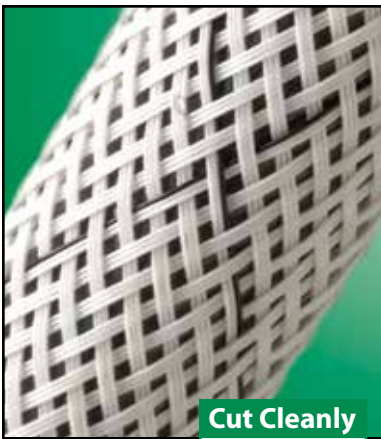




- Economical And Easy To Install
- Expands Up To 150%
- Resists Gasoline And Engine Chemicals
- Cut And Abrasion Resistant
- Mil-202, FAR-25, FMVSS 302, VW-1, FR-1 Approved
- Halogen Free



Cut Cleanly  
Hot Knife

**Material**  
Polyethylene Terephthalate

**Grade**  
FRN

**Monofilament Diameter**  
.010"

**Drawing Number**  
TF001FR-WD

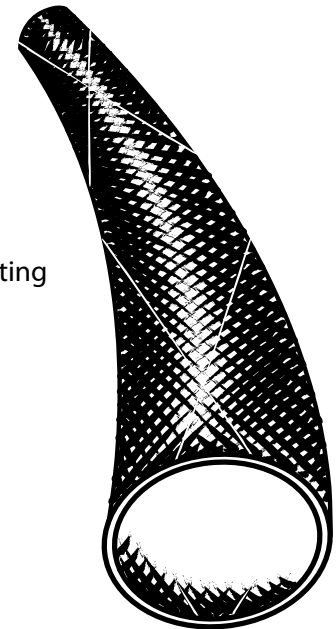
| Nominal Size              | Part #    | Expansion Range |        | Bulk Spool | Shop Spool | Available Colors | Lbs/100' |
|---------------------------|-----------|-----------------|--------|------------|------------|------------------|----------|
|                           |           | Min             | Max    |            |            |                  |          |
| 1/8"                      | FRN0.13   | 3/32"           | 1/4"   | 1,000'     | 225'       | 7                | 0.16     |
| 1/4"                      | FRN0.25   | 1/8"            | 7/16"  | 1,000'     | 200'       | 7                | 0.24     |
| 3/8"                      | FRN0.38   | 3/16"           | 5/8"   | 500'       | 125'       | 7                | 0.57     |
| 1/2"                      | FRN0.50   | 1/4"            | 3/4"   | 500'       | 100'       | 7                | 0.72     |
| 3/4"                      | FRN0.75   | 1/2"            | 1 1/4" | 250'       | 75'        | 7                | 1.07     |
| 1"                        | FRN1.00   | 5/8"            | 1 5/8" | 250'       | 65'        | 7                | 1.34     |
| 1 1/4"                    | FRN1.25   | 3/4"            | 1 3/4" | 250'       | 50'        | 7                | 1.60     |
| 1 1/2"                    | FRN1.50   | 1"              | 2 1/2" | 200'       | 40'        | 7                | 1.96     |
| 1 3/4"                    | FRN1.75   | 1 1/4"          | 2 3/4" | 200'       | 30'        | 7                | 2.70     |
| 2"                        | FRN2.00   | 1 1/2"          | 3 1/2" | 200'       | 50'        | 7                | 3.30     |
| 2 1/2"                    | FRN2.50   | 1 3/4"          | 4 1/2" | 200'       | 50'        | 7                | 3.80     |
| 3"                        | FRN3.00   | 2 1/2"          | 4 3/4" | 100'       | 50'        | 7                | 4.00     |
| <b>3 End Construction</b> |           |                 |        |            |            |                  |          |
| 1/4"                      | FR30.25TB | 1/8"            | 3/8"   | 1,000'     | 200'       | TB, GW, TW       | 0.39     |

## Flame Retardant, Economical Sleeving Solution

Flexo PET Flame Retardant (FR) sleeving is the perfect choice for electronic and high tech applications where flame retardance and durability are primary concerns. Ease of installation makes FR an efficient choice for long runs of wire or cable.

The addition of an organic combustion inhibitor to our standard polyethylene terephthalate gives FR an Underwriters Lab and CSA flame resistance rating of VW-1.

Colors Available:  
BK,TW,GW,TB,YS,OS,SP



FR meets or exceeds automotive and aircraft engineering standards for flammability and flame retardance.

Colors Available:



Black (BK), White with Black Tracer (TW), Gray with White Tracer (GW), Black with White Tracer (TB), Black with Yellow Tracer (YS), Black with Orange Tracer (OS), Black with Red Tracer (SP).



800.323.5140 • 973.300.9242 • fax: 973.300.9409  
104 Demarest Road • Sparta, NJ 07871





# ABRASION FLAMMABILITY

**Abrasion Resistance**  
**Medium**

Rating \_\_\_\_\_ VW-1

**Abrasion Test Machine**  
**Taber 5150**

**Abrasion Test Wheel**  
**Calibrase H-18**

**Abrasion Test Load**  
**500g**

**Room Temperature**  
**80°F**

**Humidity**  
**70%**

**Minor Scuffing Is Visible**  
**100 Test Cycles**

**Several Broken Strands**  
**And Small Hole**  
**Developing**  
**500 Test Cycles**

**Material Destroyed**  
**700 Test Cycles**

**Pre-Test Weight**  
**4124.0 mg**

**Post-Test Weight**  
**3884.7 mg**

**Test End Loss Of Mass**  
**Point Of Destruction**  
**239.3 mg**

# CHEMICAL RESISTANCE

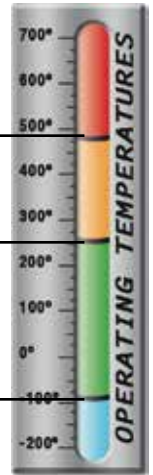
1=No Effect      4=More Affected  
2=Little Effect    5=Severely Affected  
3=Affected

|                                  |      |
|----------------------------------|------|
| Aromatic Solvents _____          | 2    |
| Aliphatic Solvents _____         | 1    |
| Chlorinated Solvents _____       | 3    |
| Weak Bases _____                 | 1    |
| Salts _____                      | 1    |
| Strong Bases _____               | 2    |
| Salt Water 0-S-1926 _____        | 1    |
| Hydraulic Fluid MIL-H-5606 _____ | 1    |
| Lube Oil MIL-L-7808 _____        | 1    |
| De-Icing Fluid MIL-A-8243 _____  | 1    |
| Strong Acids _____               | 3    |
| Strong Oxidants _____            | 2    |
| Esters/Ketones _____             | 2    |
| UV Light _____                   | 1    |
| Petroleum _____                  | 1    |
| Fungus ASTM G-21 _____           | 1    |
| Halogen Free _____               | Yes  |
| RoHS _____                       | Yes  |
| SVHC _____                       | None |

**Melt Point**  
*ASTM D-2117*  
**482°F (250°C)**

**Maximum Continuous**  
*Mil-I-23053*  
**257°F (125°C)**

**Minimum Continuous**  
**-94°F (-70°C)**



# PHYSICAL PROPERTIES

|                                   |           |
|-----------------------------------|-----------|
| Monofilament Diameter _____       | .010      |
| <i>ASTM D-204</i>                 |           |
| Flammability Rating _____         | VW-1      |
| <i>FMVSS-302 Approved</i>         |           |
| Recommended Cutting _____         | Hot Knife |
| Colors _____                      | 7         |
| Wall Thickness _____              | .025      |
| Tensile Strength (Yarn) _____     | 5         |
| <i>ASTM D-2256 Lbs</i>            |           |
| Specific Gravity ASTM D-792 _____ | 1.38      |
| Moisture Absorption% _____        | .1-.2     |
| <i>ASTM D-570</i>                 |           |
| Hard Vacuum Data _____            |           |
| <i>ASTM E-595 at 10-5 torr</i>    |           |
| TML _____                         | .19       |
| CVCM _____                        | .04       |
| WVR _____                         | .06       |
| Smoke D-Max _____                 | 275       |
| <i>ASTM E-662</i>                 |           |
| Outgassing _____                  | Med       |
| Oxygen Index _____                | 31        |
| <i>ASTM D-2863</i>                |           |

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