



- 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

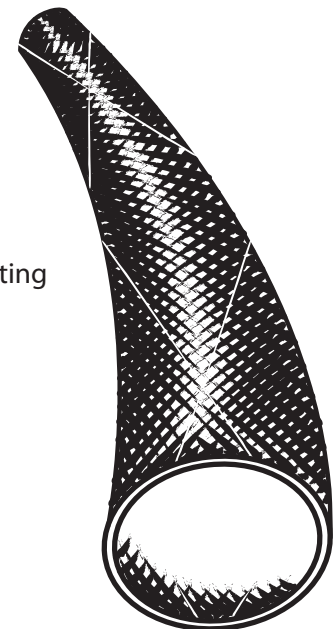
Nominal Size	Part #	Expansion Range		Bulk Spool	Shop Spool	Available Colors	Lbs/100'
		Min	Max				
1/8"	FRN0.13	3/32"	1/4"	1,000'	225'	7	0.16
1/4"	FRN0.25	1/8"	7/16"	1,000'	200'	7	0.24
3/8"	FRN0.38	3/16"	5/8"	500'	125'	7	0.57
1/2"	FRN0.50	1/4"	3/4"	500'	100'	7	0.72
3/4"	FRN0.75	1/2"	1 1/4"	250'	75'	7	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).



## 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

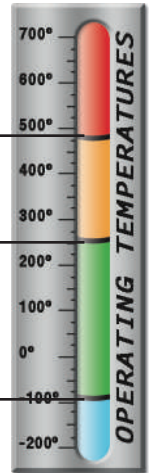
1=No Effect      4=More Affected  
2=Little Effect    5=Severely Affected  
3=Affected

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