

# FLEXO® FR

- **Economical And Easy To Install**
- **Expands Up To 150%**
- **Resists Gasoline And Engine Chemicals**
- **Cut And Abrasion Resistant**
- **Custom Lengths Available**

## Put-Ups

NOMINAL SIZE	EXPANSION RANGE MIN MAX	PART #	BULK SPOOL	SHOP SPOOL	RETAIL	CLAM	BAG	AVAILABLE COLORS	LBS/ 100'
1/8"	3/32" 1/4"	FRN0.13	1,000'	225'	110'	25'	10'	2	0.16
1/4"	1/8" 7/16"	FRN0.25	1,000'	200'	100'	25'	10'	2	0.24
3/8"	3/16" 5/8"	FRN0.38	500'	125'	60'	25'	10'	2	0.57
1/2"	1/4" 3/4"	FRN0.50	500'	100'	50'	25'	10'	2	0.77
3/4"	1/2" 1 1/4"	FRN0.75	250'	75'	35'	25'	10'	2	1.20
1 1/4"	3/4" 1 3/4"	FRN1.25	250'	50'	25'	n/a	10'	2	1.60
1 1/2"	1" 2 1/2"	FRN1.50	200'	40'	25'	n/a	10'	2	1.96
1 3/4"	1 1/4" 2 3/4"	FRN1.75	200'	30'	25'	n/a	10'	2	2.70
2"	1 1/2" 3 1/2"	FRN2.00	200'	50'	25'	n/a	10'	2	3.30
2 1/2"	1 3/4" 4 1/2"	FRN2.50	200'	50'	25'	n/a	10'	2	3.80
3"	2 1/2" 4 3/4"	FRN3.00	100'	50'	25'	n/a	10'	2	4.00



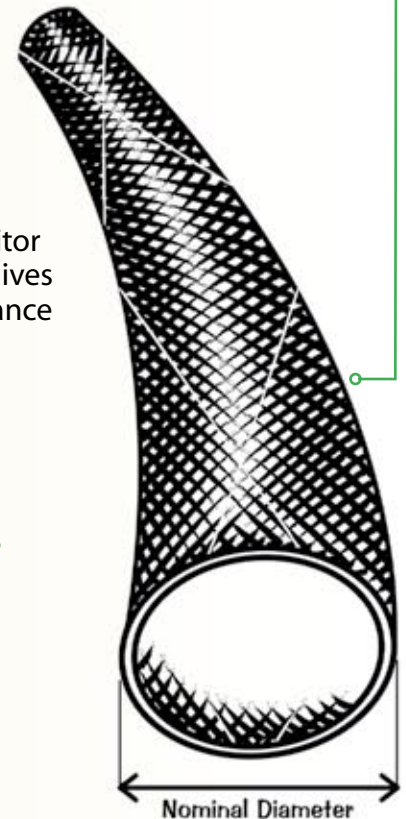
**Cut Cleanly  
Hot Knife**

## Flame Retardant, Economical Sleeving Solution

Flexo® PET Flame Retadant (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:**  
2 = TW and TB.



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

Custom Colors Available:



White with Black Tracer (TW)  
and Black with White Tracer (TB).

**Material**  
**Polyethylene Terephthalate**

**Grade**  
**FR**

**Monofilament Diameter**  
**.010"**

**Drawing Number**  
**TF001FR-WD**



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**HALOGEN FREE**



File# LR 66-145



File# E 107 055



**FLEXO® FR**



**Abrasion Resistance**  
*ASTM D-4157*  
**Good**

**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**



Rating \_\_\_\_\_ **VW-1, FAR 25, FR-1,  
FMVSS 302, MIL-202**

Moisture Absorption \_\_\_\_\_ **.08**  
*% ASTM D-570*

Smoke D-Max \_\_\_\_\_ **275**  
*ASTM E-662*

Toxicity Index \_\_\_\_\_ **6.2**  
*USN 713*



**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 <i>O-S-1926</i> _____	1
Hydraulic Fluid <i>MIL-H-5606</i> _____	1
Lube Oil <i>MIL-L-7808</i> _____	1
De-Icing Fluid <i>MIL-A-8243</i> _____	1
Strong Acids _____	3
Strong Oxidants _____	2
Esters/Keytones _____	2
UV Light _____	1
Petroleum _____	1
Fungus <i>ASTM D-2863</i> _____	1
Outgassing _____	Medium
Oxygen Index <i>ASTM D-2863</i> _____	31
Halogen Free _____	Yes

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

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

**Minimum Continuous**  
**-75°C (-103°F)**



**PHYSICAL  
PROPERTIES**

Monofilament Diameter _____	.010
<i>ASTM D-204</i>	
Recommended Cutting _____	Hot Knife
Stock Colors _____	2
Wall Thickness _____	.025
Tensile Strength PSI _____	55,000
<i>ASTM D-2256</i>	
Tenacity (GM/Denier) <i>ASTM D-4157</i> _____	4.6
Specific Gravity <i>ASTM D-792</i> _____	1.38
Typical Elongation <i>ASTM D-2256-80</i>	
Break _____	15
3g/Denier _____	5
Hard Vacuum Data <i>ASTM E-595 at 10-5 torr</i>	
TML _____	.19
CVCM _____	.01
WVR _____	.11