### ADVANCED ENGINEERING **Technical Data Sheet**





- 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



**Hot Knife** 

#### Material **Polyethylene Terepthalate**

Grade

FRN

**Monofilament Diameter** .010″

**Drawing Number** TF001FR-WD



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Nominal	Part	Expansion Range		Bulk	Shop	Retail	Clam	Bag	Available	Lbs/
Size	#	Min	Max	Spool	Spool				Colors	100′
1/8″	FRN0.13	3/32″	1/4″	1,000′	225′	110′	25′	10′	4	0.16
1/4″	FRN0.25	1/8″	7/16″	1,000′	200′	100′	25′	10′	4	0.24
3/8″	FRN0.38	3/16″	5/8″	500′	125′	60′	25′	10′	4	0.57
1/2″	FRN0.50	1/4″	3/4″	500′	100′	50′	25′	10′	4	0.72
3/4″	FRN0.75	1/2″	1 1/4″	250′	75′	35′	25′	10′	4	0.87
1″	FRN1.00	5/8″	1 5/8″	250′	65′	25′	n/a	10′	4	1.34
1 1/4″	FRN1.25	3/4″	1 3/4″	250′	50′	25′	n/a	10′	4	1.60
1 1/2″	FRN1.50	1″	2 1/2"	200′	40′	25′	n/a	10′	4	1.96
1 3/4″	FRN1.75	1 1/4″	2 3/4"	200′	30′	25′	n/a	10′	4	2.70
2″	FRN2.00	1 1/2″	3 1/2″	200′	50′	25′	n/a	10′	4	3.30
2 1/2″	FRN2.50	1 3/4″	4 1/2″	200′	50′	25′	n/a	10′	4	3.80
3″	FRN3.00	2 1/2"	4 3/4″	100′	50′	25′	n/a	10′	4	4.00
3 End Co	3 End Construction									
1/4″	FR30.25TB	1/8″	3/8″	1,000′	200′				TB	0.39

Put-Ups -

#### Flame Retardant, Economical **Sleeving Solution**

Flexo<sup>®</sup> 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.

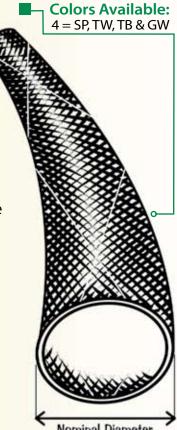
The addition of an organic combustion inhibitor to our standard polyethylene terepthalate gives FR an Underwriters Lab and CSA flame resistance rating of VW-1.

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

**Colors Available:** 



Black with Red Tracer (SP), White with Black Tracer (TW), Black with White Tracer (TB) and Gray with White Tracer (GW).



Nominal Diameter



### ADVANCED ENGINEERING **Technical Data Sheet**





**Abrasion Resistance** Medium

**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



**VW-1** Rating

## Chemical Resistance

4=More Affected

1=No Effect 2=Little Effect 5=Severely Affected 3=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/Keytones	2
UV Light	1
Petroleum	1
Fungus ASTM G-21	1
Halogen Free	Yes
RoHS	Yes
SVHC	None

TEMPERATURE Melt Point ASTM D-2117 482°F (250°C) 400\* Maximum Continuous 200\* Mil-I-23053 257°F (125°C) 200\* ERATING 100\* Minimum Continuous

-94°F (-70°C)

# PHYSICAL

Monofilament Diameter ASTM D-204	.010
Flammability Rating FMVSS-302 Approved	VW-1
Recommended Cutting_	Hot Knife
Colors	4
Wall Thickness	.025
Tensile Strength (Yarn) ASTM D-2256 Lbs	5
Specific Gravity ASTM D	- <i>792</i> 1.38
Moisture Absorption % ASTM D-570	.12
Hard Vacuum Data ASTN	1 E-595 at 10-5 torr
TML	.19
CVCM	.04
WVR	.06
Smoke D-Max ASTM E-662	275
Outgassing	Med
Oxygen Index ASTM D-2863	31

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