



- Meets UL 2024
- VW-1, FAR 25 Approved
- Expands Up To 150%
- Resists Gasoline And Engine Chemicals
- Cut And Abrasion Resistant
- Easy To Install

Nominal Size	Part #	Expansion Range		Bulk Spool	Shop Spool	Available Colors	Lbs/100'
		Min	Max				
1/8"	HTN0.13	3/32"	1/4"	1,000'	225'	2	0.25
1/4"	HTN0.25	1/8"	7/16"	1,000'	200'	2	0.38
3/8"	HTN0.38	3/16"	5/8"	500'	125'	2	0.86
1/2"	HTN0.50	1/4"	3/4"	500'	100'	2	1.10
3/4"	HTN0.75	1/2"	1 1/4"	250'	75'	2	1.70
1"	HTN1.00	5/8"	1 5/8"	250'	65'	2	2.20
1 1/4"	HTN1.25	3/4"	1 3/4"	250'	50'	2	2.60
1 3/4"	HTN1.75	1 1/4"	2 3/4"	200'	30'	2	4.40
2"	HTN2.00	1 1/2"	3 1/2"	200'	50'	2	4.60

**Put-Ups**



Cut Cleanly  
Hot Knife

**Material HT**

Ethylene-chlorotrifluoroethylene

**Grade**

HTN

**Monofilament Diameter**

.011"

**Drawing Number**

TF001HT-WD

**Very Low Outgassing, Self-Extinguishing UL-2024 Plenum Rated Sleeving**

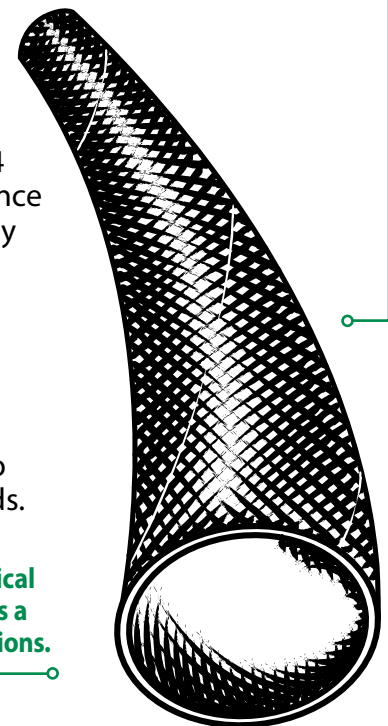
Colors Available:  
TW & TB

HALAR® (HT) self-extinguishing sleeving is used where flammability, high temperature endurance and low outgassing are primary concerns. HT is braided from 11 mil ethylene chlorotrifluoroethylene (ECTFE) copolymer monofilament.

Because of its low flame spread and smoke generation properties, HT has received UL 2024 and NFPA 262 plenum listings, UL flame resistance rating of VW-1 and exceeds automotive industry requirements of FMVSS 302, as well as aviation industry requirements of FAR 25.

HT resists a wide range of corrosive chemicals and organic solvents, including strong acids, chlorine and aqueous caustics. HALAR® ECTFE also maintains useful properties on exposure to Cobalt 60 radiation at doses up to 200 megarads.

Halar's low outgassing, as well as its heat, chemical and radiation properties, make it ideal for use as a component in technologically advanced applications.



Colors Available:



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



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Halar® is a registered trademark of the Solvay Solexis Corporation.

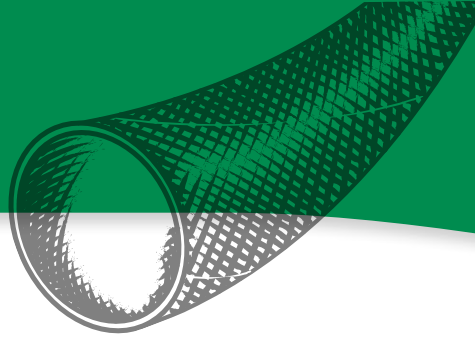


**VW-1**

**Plenum**

**FAR-25**





## ABRASION FLAMMABILITY

**Abrasion Resistance**  
**Medium**

Rating \_\_\_\_\_ FAR 25, VW-1

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

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

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

**Room Temperature**  
**71°F**

**Humidity**  
**58%**

**Material Destroyed**  
**600 Test Cycles**

**Pre-Test Weight**  
**6,354.9 mg**

**Post-Test Weight**  
**5,922.8 mg**

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

## CHEMICAL RESISTANCE

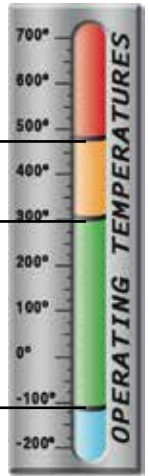
1=No Effect      4=More Affected  
2=Little Effect    5=Severely Affected  
3=Affected

Aromatic Solvents _____	1
Aliphatic Solvents _____	1
Chlorinated Solvents _____	1
Weak Bases _____	1
Salts _____	1
Strong Bases _____	1
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 _____	1
Strong Oxidants _____	1
Esters/Ketones _____	2
UV Light _____	1
Petroleum _____	1
Fungus ASTM G-21 _____	1
Halogen Free _____	Yes
RoHS _____	Yes
SVHC _____	

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

**Maximum Continuous**  
Mil-I-23053  
**302°F (150°C)**

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



## PHYSICAL PROPERTIES

Monofilament Diameter _____	.011
ASTM D-204	
Flammability Rating _____ FAR 25, VW-1	
FMVSS-302 Approved	
Recommended Cutting _____	Hot Knife
Colors _____	2
Wall Thickness _____	.028
Tensile Strength (Yarn) _____	4.3
ASTM D-2256 Lbs	
Specific Gravity ASTM D-792 _____	1.68
Moisture Absorption _____	.02
% ASTM D-570	
Hard Vacuum Data _____	
ASTM E-595 at 10-5 torr	
TML _____	.18
CVCM _____	.02
WVR _____	0
Smoke D-Max _____	94
ASTM E-662	
Outgassing _____	Low
Oxygen Index _____	64
ASTM D-2863	

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