

HALAR®

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

Put-Ups

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



**Cut Cleanly
 Hot Knife**

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

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.

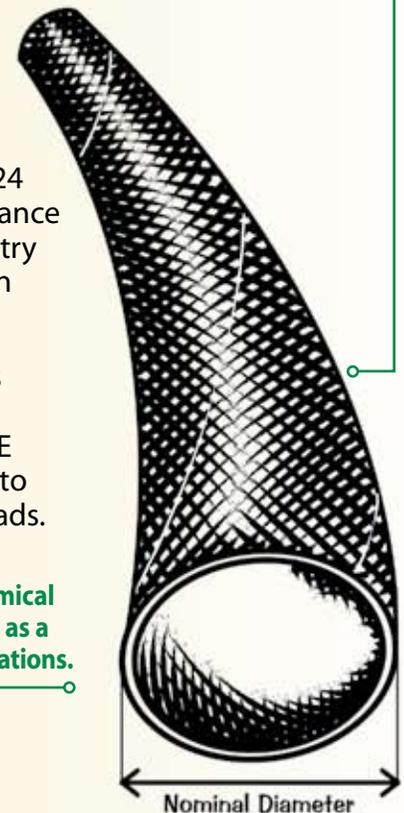
■ **Colors Available:**
 2 = TB & TW.

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:



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



- Material HT**
 Ethylene-chlorotrifluoroethylene
- Grade**
 HTN
- Monofilament Diameter**
 .011"
- Drawing Number**
 TF001HT-WD





HALAR®



Abrasion Resistance
Medium

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



Rating _____ FAR 25, VW-1



Chemical Resistance

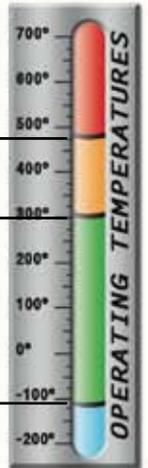
1=No Effect 4=More Affected
 2=Little Effect 5=Severely Affected
 3=Affected

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/Keytones	_____	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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