

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



**Cut Cleanly
Hot Knife**

Material HT

Ethylene-chlorotrifluoroethylene

Grade

HTN

Monofilament Diameter

.011"

Drawing Number

TF001HT-WD



www.techflex.com

800.323.5140 • 973.300.9242 • fax: 973.300.9409
104 Demarest Road • Sparta, NJ 07871

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

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

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.

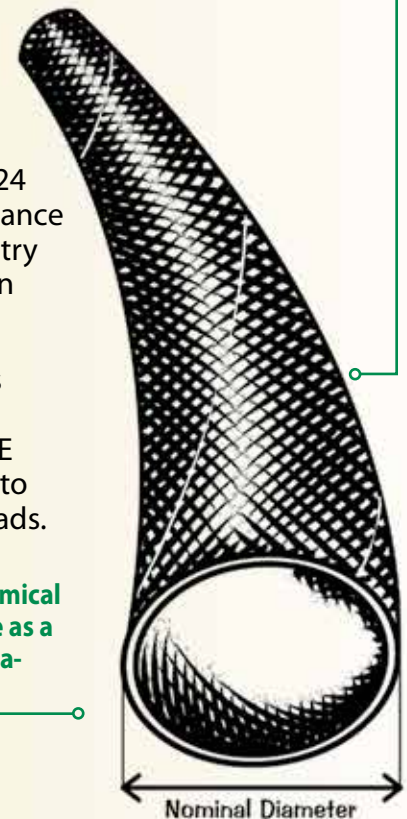
Halar's low outgassing, as well as its heat, chemical and radiation properties, make it ideal for use as a component in technologically advanced applications.

Colors Available:



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

Colors Available:
2 =TW and TB



VW-1 Plenum FAR-25



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

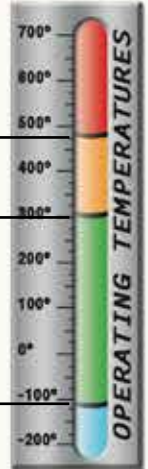
1=No Effect 4=More Affected
2=Little Effect 5=Severely Affected
3=Affected

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	No
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 _____ 4

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