



FLEXO® HALAR® SELF-EXTINGUISHING · VERY LOW OUTGASSING UL-2024 PLENUM RATED SLEEVING

HALAR® (HTN) self-extinguishing sleeving is used where flammability, high temperature endurance and low outgassing are primary concerns. Halar® is braided from 11 mil ethylene chlorotrifluoroethylene (ECTFE) copolymer monofilament. Because of its low flame spread and smoke generation properties, Halar® 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. Halar® 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.

SIZING CHART

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

*Put-Ups: "M" = Shop Spool and "L" = Bulk Spool

FEATURES

Material	Ethylene-Chlorotrifluoroethylene
Grade	HTN
Monofilament Diameter	.011"
Drawing Number	TF001HTN-WD
Cutting	Hot Knife

COLORS



Black (BK), White w/Black Tracer (TW), Black w/White Tracer (TB)

CERTIFICATIONS





ABRASION

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

PHYSICAL PROPERTIES

Monofilament Diameter (ASTM D-204)	.011"
Flammability Rating (FMVSS-302 Approved)	FAR-25, VW-1
Recommended Cutting	Hot Knife
Colors	3
Wall Thickness	.028"
Tensile Strength (Yarn) (ASTM D-2256 Lbs)	4.3
Specific Gravity (ASTM D-792)	1.68
Moisture Absorption % (ASTM D-570)	.02
Hard Vacuum Data (ASTM E-595 at 10-5 torr)	
TML	.18
CVCM	.02
WVR	0
Smoke D-Max (ASTM E-662)	94
Outgassing	Low
Oxygen Index (ASTM D-2863)	64

FLAMMABILITY

Rating	FAR-25, VW-1
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OPERATING TEMPERATURES

Melt Point (ASTM D-2117)	482°F / 250°C
Maximum Continuous	302°F / 150°C
Minimum Continuous	-103°F / -75°C

CHEMICAL RESISTANCE

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