



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	Kgs/100m
				M	L		
3,2mm	HTN0.13	2,4mm	6,4mm	68,6m	304,8m	3	0,37
6,4mm	HTN0.25	3,2mm	11,1mm	61,0m	304,8m	3	0,57
9,5mm	HTN0.38	4,8mm	15,9mm	38,1m	152,4m	3	1,28
12,7mm	HTN0.50	6,4mm	19,1mm	30,5m	152,4m	3	1,64
19,1mm	HTN0.75	12,7mm	31,8mm	22,9m	76,2m	3	2,53
25,4mm	HTN1.00	15,9mm	41,3mm	19,8m	76,2m	3	3,27
31,8mm	HTN1.25	19,1mm	44,5mm	15,2m	76,2m	3	3,87
44,5mm	HTN1.75	31,8mm	69,9mm	9,1m	61,0m	3	6,55
50,8mm	HTN2.00	38,1mm	88,9mm	15,2m	61,0m	3	6,85

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



FEATURES

Material	Ethylene-Chlorotrifluoroethylene
Grade	HTN
Monofilament Diameter	0,28mm
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 / 22°C
Humidity	58%
Material Destroyed	600 Test Cycles
Pre-Test Weight	6 354,9mg
Post-Test Weight	5 922,8mg
Test End Loss Of Mass Point Of Destruction	432,1mg

PHYSICAL PROPERTIES

Monofilament Diameter (ASTM D-204)	0,28mm
Flammability Rating (FMVSS-302 Approved)	FAR-25, VW-1
Recommended Cutting	Hot Knife
Colors	3
Wall Thickness	0,7mm
Tensile Strength (Yarn) (ASTM D-2256 Lbs)	4,3
Specific Gravity (ASTM D-792)	1,68
Moisture Absorption % (ASTM D-570)	0,02%
Hard Vacuum Data (ASTM E-595 at 10-5 torr)	
TML	0,18
CVCM	0,02
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 (Mil-I-23053)	302°F / 150°C
Minimum Continuous (Mil-I-23053)	-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 (O-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	