

# PROTECTIVE SLEEVING

## Expando® HTNS-L/HO

1:2 Expansion ratio thin wall braided sleeve

### Applications

Expando HTNS-L/HO is a thin-wall braided sleeve manufactured from meta aramid Nomex™. Its highly expandable structure allows easy installation over long lengths, even after the fitting of end connectors.

Expando HTNS-L/HO is flexible, expandable and non-flammable, ensuring excellent performance in the most diverse and aggressive environments. HTNS-L/HO is designed for the protection of wire and cable bundles against flame, high temperatures and mechanical abrasion.

Expando HTNS-L/HO has an oil and water repellent treatment (HO) to reduce humidity absorption and to improve impermeability to fluids. HTNS-L/HO also offers excellent resistance to gamma and x-rays.

HTNS-L/HO is used on a variety of applications in the military, marine, aeronautical, railway and electrical equipment industries.

### Features & Benefits

- 1 : 2 expansion ratio
- Low temperature flexibility to -60°C
- Thin wall
- Lightweight
- Self-extinguishing
- Excellent abrasion protection
- Resistant to gamma & x-rays
- Oil and water repellent

### Operating Temperature

- -60°C to +240°C



**Note:** For further information on the **Expando HTNS-L/HO** product range or assistance with your specific sleeving requirements, please contact **IS-Rayfast**.

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### Technical Performance

Properties	Test	Results
Working temperature		-60°C to +240°C (continuous) Up to +310°C (short term)
Carbonisation	Above +370°C	Does not melt
Abrasion resistance	EN 6059 Part 403	Pass
Bending strength	50,000 bending cycles at +180°C	Excellent
Flame resistance	UL 224	Sleeve classified VWI
(Self-extinguishing properties)	UL 94 FAR 25 AMDT.25-72§ 853(b)	Base material classified V0 Pass
Fluid resistance	EN 6059 Part 303	
• Fuel: JP5 (NATO F44)	(24hrs with various temperatures)	Pass
• Hydraulic fluids:		
• Skydrol 500B4 & L D4		Pass
• Mineral oil: MIL-L-7870A		Pass
• Synthetic oil: MIL-L 23699		Pass
• Cleaning fluids:		
Forane 141B & MIL-L-87936		Pass
• De-icing fluid: MIL-A-8243		Pass
Humidity resistance	1000h at +150°C in air saturated with water vapor	Retains 70% of its original tensile strength
Water/oil repellent treatment (HO)	EN 6059 Part 305	Pass

**Note:** Longitude shrinkage should be taken into account when utilizing the full expansion properties of the sleeve.

### Expando HTNS-L/HO Dimensions (all dimensions are in mm's)

Description	Recommended Diameter range (mm)		Weight (g/100m)	Standard Packaging (m)	Ordering Description
	Min.	Max.			
HTNS-L/HO 2	1	2	270	100	HTNS-L-HO-2mm-5
HTNS-L/HO 4	2	4	400	100	HTNS-L-HO-4mm-5
HTNS-L/HO 6	4	8	800	100	HTNS-L-HO-6mm-5
HTNS-L/HO 8	6	12	1200	50	HTNS-L-HO-8mm-5
HTNS-L/HO 10	8	16	1400	50	HTNS-L-HO-10mm-5
HTNS-L/HO 15	10	20	1700	50	HTNS-L-HO-15mm-5
HTNS-L/HO 20	12	24	2200	50	HTNS-L-HO-20mm-5
HTNS-L/HO 25	15	30	3250	50	HTNS-L-HO-25mm-5
HTNS-L/HO 30	20	40	3800	50	HTNS-L-HO-30mm-5

### Ordering Information

- Standard colour: 5 = (Olive-green).  
special colours are available, subject to a minimum order quantity.
- Ordering description: Specify product name, size and colour; **HTNS-L-HO-4mm-5** (5=Olive-green).
- Ordering Example:** A olive-green protective sleeve capable of covering a 11mm cable diameter is required = **HTNS-L-HO-10mm-5** (5=Olive-green).