

PROTECTIVE SLEEVING

Expando® HR & HR Plus

Tough, lightweight oversleeving

Applications

Expando HR and HR Plus are tough, lightweight, fluoropolymer oversleeves used to protect cable assemblies, hoses and wire harnesses from chafing, cutting and abrasion. The open-weave construction enables each size to expand to fit a range of application shapes and sizes. This open-weave construction also makes them highly flexible and resistant to trapping water, heat and humidity.

Expando HR and HR Plus protective oversleeves have many uses in the aerospace, marine, electronic, military and general manufacturing industries.

Features & Benefits

- 1:3 expansion ratio
- Flame resistant
- Excellent abrasion resistance
- Low vacuum outgassing
- Self-fitting over many shapes and sizes

Operating Temperature

- -70°C to +150°C

Technical Performance

Properties	Test	Results	
Operating Temperature Range	-	-70°C to +150°C	
Melt Temperature ASTM D-2117	-	+240°C	
Low Temperature Flexibility	MIL-DTL-23053E	-70°C	
Flammability	UL 1441	VW-1 classified	
Copper Corrosivity	MIL-1-23053	No Effect	
		Expando HR	Expando HR Plus
Flammability	F.A.R Part 25	-	Pass
	UL 1441	VW-1	VW-1 classified
Smoke Density	ASTM E-1354	Dmc = 0.30	Dmc = 0.30
Hard Vacuum			Note: Expando sleeving products made with the patented "Plus" treatment should not be used in hard vacuum environments nor immersed in solvents or liquids where Plus particulates could contaminate the system environment. For more information on these products please contact us.
TML	ASTM E-595	0.14%	
CVCM		0.02%	
WVR		0.01%	
Fluid Resistance		Tensile Retention:	
JP4 Jet Fuel (MIL-T-5624)	MIL-I-23053	97%	
Hydraulic Fluid (MIL-H-5606)		100%	
Lube Oil (MIL-1-7808)		99%	
De-Icing Fluid (MIL-A-8243)		98%	
Salt Water (O-S-1926)		98%	

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



Approvals (HR product only)

- ABS0890H
- PAN6480D
- BMS13-52

Expando® HR & HR Plus

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Expando HR Dimensions (all dimensions are in mm)

Recommended Diameter Range (mm)		Weight (g/100m)	Standard Packaging (m)	Ordering Description
Min.	Max.			
2	6	402	600	HR-3mm-Colour
3	11	596	300	HR-6mm-Colour
6	19	1790	150	HR-12mm-Colour
12	32	2685	150	HR-20mm-Colour
19	45	3431	75	HR-30mm-Colour
32	70	5669	75	HR-45mm-Colour

Expando HR Plus Dimensions (all dimensions are in mm)

Recommended Diameter Range (mm)		Weight (g/100m)	Standard Packaging (m)	Ordering Description
Min.	Max.			
2	6	402	600	HR-Plus-3mm-Colour
3	11	596	300	HR-Plus-6mm-Colour
6	19	1790	150	HR-Plus-12mm-Colour
12	32	2685	150	HR-Plus-20mm-Colour
19	45	3431	75	HR-Plus-30mm-Colour
32	70	5669	75	HR-Plus-45mm-Colour

Ordering Information

Standard colours: Black, Red, White.
 Ordering description: Specify product name, size and colour: HR-3mm-Black.
 Ordering Example: A black protective sleeve capable of covering a 10mm cable diameter is required = HR-12mm-Black.

Note: For further information on the Expando HR product range or assistance with your specific sleeving requirements, please contact us.