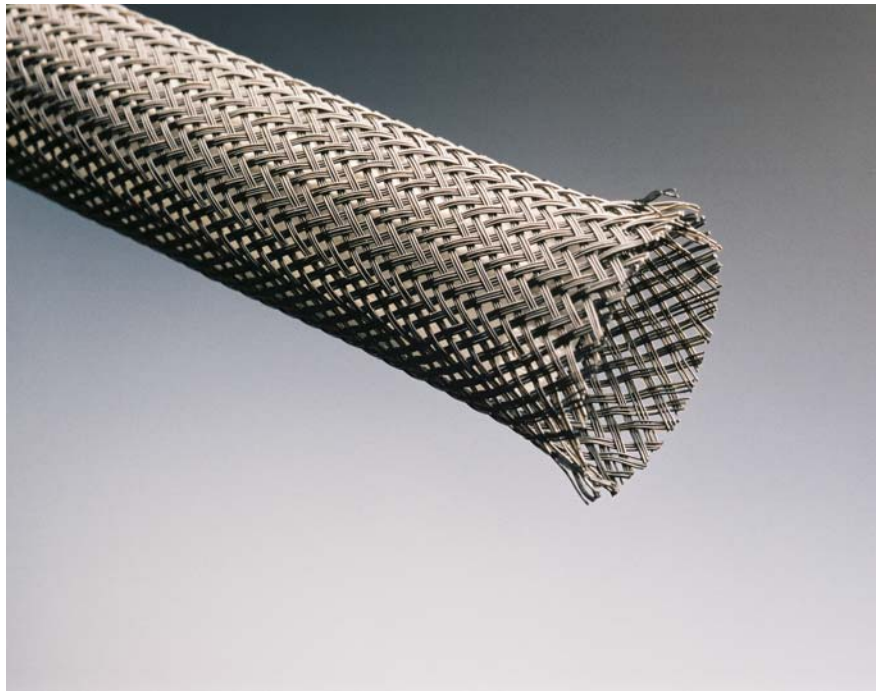


Product Highlights

- Working temperature
-70°C to +200°C
- 1:2 expansion ratio
- Low temperature flexibility
to -70°C
- Flammability
UL 1441 VW-1
F.A.R Part 25
- UL 94 V0 (raw material)
- Halogen-free
- UL recognized
- CSA recognized
(File #LR52852)
- Low toxicity, smoke
generation and offgasing
- Does not trap heat or
humidity
- Self-fitting over many
shapes and sizes



Expando[®] 686DM

Bentley-Harris Expando 686DM products are tough, lightweight oversleeves used to protect cable assemblies, hoses and wire harnesses from chafing, cutting and abrading. The open-weave construction of Expando products enables each size to expand to fit several application shapes and sizes. This open-weave construction also makes them highly flexible and resistant to trapping water, heat and humidity.

Expando 686DM is a protective oversleeve designed for mechanical protection in temperature extremes and hostile environmental conditions. Rated to 200°C, Expando 686DM is a UL Recognized Component and meets VW-1 and F.A.R. part 25 flammability requirements.

Featuring a dual monofilament construction, Expando 686DM blends larger PEEK* (polyetheretherketone) guard stands with PPS (polyphenylene sulfide) support strands. This blend makes 686DM rugged, yet light weight. The inherent properties of the raw materials give Expando 686DM low levels of flammability, toxicity, smoke generation and hard vacuum offgassing. Because of its high temperature air guns used with heat-shrinkable elements such as strain relief, terminations and identification sleeves.

Expando 686DM is widely used in the aerospace industry for its outstanding properties in extreme environments. This product should be considered for aircraft, space, military, marine, and hostile-environment applications.

Performance Data

Expando® 686DM

Properties	Test method	Result
Working temperature		-70°C to +200°C
Melt temperature	ASTM D-3418	PPS : 285°C PEEK : 334°C
Low temperature flexibility	MIL-DTL-23053E	- 70°C
Flammability	UL 1441 F.A.R 25 ¶ 853 F sect 3	VW-1 Pass
Smoke density	ASTM E-662	D _{mc} = 2.3
Oxygen index	ASTM D-2863	36.5
Toxicity index	NES 713	1.6
Hard Vacuum	ASTM E-595	
<ul style="list-style-type: none"> • TML • CVCM • WVR 		0.30% 0.00% 0.27%
Fluid Resistance	MIL-I-23053	Retains 91% of its initial breaking strength
<ul style="list-style-type: none"> • Jet Fuel JP4 (MIL-T-5624) • Hydraulic Fluid (MIL-H-5606) • Lube Oil (MIL-I-7808) • De-Ice Fluid (MIL-A-8243) • Salt water (O-S-1926) 		

Product Specification Expando 686DM

Longitudinal shrinkage should be taken into account when utilizing expansion properties of the sleeve.

Description	Recommended Application Range		Weight (g/100m)	Standard Packaging (m)
	Min. Ø	Max. Ø		
Expando 686 DM 3-X	2	6	209	600
Expando 686 DM 6-X	3	11	447	300
Expando 686 DM 10-X	5	19	925	150
Expando 686 DM 13-X	6	22	1194	150
Expando 686 DM 19-X	13	35	1790	150
Expando 686 DM 32-X	19	45	2387	75
Expando 686 DM 45-X	25	57	2685	75
Expando 686 DM 51-X	38	57	4476	75
Expando 686 DM 64-X	48	76	5072	75

X = Color Code

0 = Black

9 = Natural

* UL Recognized component for sizes over 3 mm

Part Numbering System

Example:	Description	Size	Colour	Quantity
	Expando 686DM	19	0-(Black)	150

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Availability

Bentley-Harris® Expando® 686DM is available in sizes from 3 to 64 mm.

Standard colors are black and natural (tan).

Expando 686DM is supplied on cardboard spools or cut length according to your specifications.

All the numeric data show average or typical value.



End view (enlarged diameter) of Expando 686DM showing PEEK guard strands (larger) and PPS support strands (smaller grey) in a typical configuration.



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