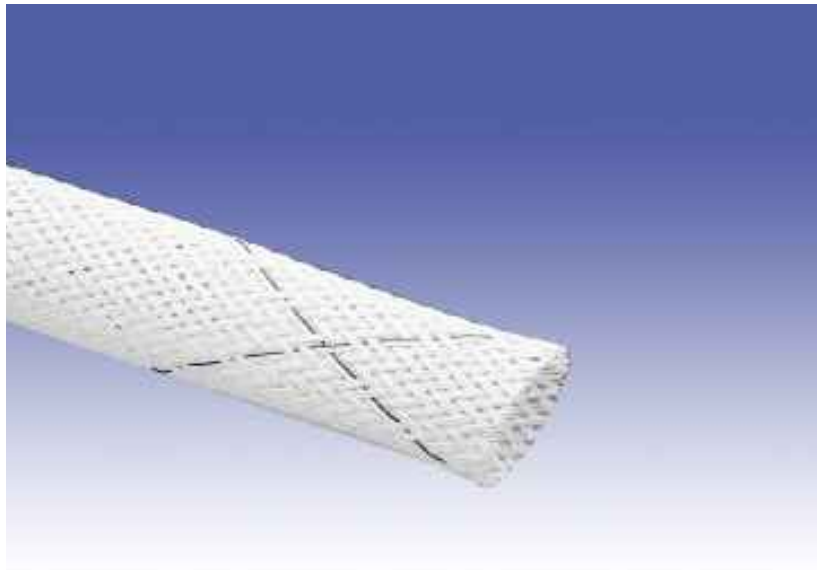


Product Highlights

- Rated to 125°C
- Low temperature flexibility to -70°C
- VW-1
- F.A.R. Part 25
- UL Recognized Component
- CSA File #LR52852
- Does not trap heat or humidity
- Rot-free
- Self-fitting over many shapes and sizes
- Cost effective



Expando® FR Plus Self-fitting Protective Oversleeve

Bentley-Harris® Expando 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 FR Plus is a braided, flame-retardant polyester (PET) sleeving designed for applications up to 125°C. This product is UL recognized as a VW-1 component, and has F.A.R. Part 25 approval. A general purpose industrial/commercial product, Expando FR balances the properties of mechanical and thermal stability with economy.

The patented Bentley-Harris Plus treatment makes end termination neater and easier. The Plus treatment creates a webbing between the filaments of the sleeving to reduce end fray during installation and through the life of the product. Because of the fray-resistant properties of Expando FR Plus, it can be cut with ordinary scissors, which reduces assembly time and eliminates the need for proper ventilation equipment required for hot-knife cutting.

Expando FR Plus protective oversleeve has many applications in the aeronautical, marine, electronic and general manufacturing industries. The ability of Expando FR Plus to retain flexibility at low temperatures makes it ideal for exposed applications in weather stations, navigation beacons, radar antennas, and airborne and space systems.

BentleyHarris®
Protection Products

Performance Data – Expando® FR Plus

Property	Test Method	Value
Filament Diameter		.010"
Melt Temperature	ASTM D-3418	239°C
Low Temperature Flexibility	MIL-DTL-23053E	-70°C
Flammability	UL 1441	VW-1
Flammability	F.A.R. Part 25	Pass
Smoke Density	ASTM E-1354	D _{mc} = 5.72
Copper Corrosivity	MIL-I-23053	No Effect

Product Specifications

Nominal Size (in)	Minimum Diameter (in)	Maximum Diameter (in)	Part Number	Typical Weight (lb/ft)	Spool Length (ft)
1/8	3/32	1/4	51210003XX	0.0019	2,000
1/4	1/8	7/16	51210006XX	0.0027	1,000
3/8	1/4	1/2	51210010XX	0.0059	500
1/2	1/4	3/4	51210013XX	0.0081	500
3/4	1/2	1 1/4	51210019XX	0.0131	500
1 1/4	3/4	1 3/4	51210032XX	0.0167	250
1 3/4	1 1/4	2 3/4	51210045XX	0.0273	250
2	1 1/2	3 1/2	51210051XX	0.0333	250
2 1/2	1 3/4	4 1/2	51210064XX	0.0463	250

XX = Color Code 32= Black with two white tracer strands
 23= White with two black tracer strands

* 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. Consult Federal-Mogul Systems Protection Group for information on protection products for these applications.

The information and illustrations given herein are believed to be reliable. Federal-Mogul makes no warranties as to their accuracy or completeness and disclaims any liability in connection with their use. Federal-Mogul's only obligations are those in the standard terms of sale for this product and Federal-Mogul will not be liable for any consequential or other damages arising out of the use or misuse of this product. Users should make their own evaluation to determine the suitability of the product for specific applications.



Systems Protection Group

241 Welsh Pool Road
 Exton, PA 19341
 Toll-free: 800-926-2472
 Tel: (610) 363-2600
 Fax: (610) 524-9086