

## Product Highlights

- Operating temperature from -70°C to +200°C (-94°F to +392°F)
- Meets VW-1 requirements
- BMS 13-52 Type III
- Low toxicity, smoke generation and offgassing
- Does not trap heat or humidity
- Rot-free
- Expandable design accommodates a variety of sizes



**Expando® PPS** (polyphenylene sulfide) is an expandable sleeve designed for mechanical protection in high temperatures. Rated to +200°C (+392°C), Expando PPS meets VW-1 flame test requirements.

The inherent properties of PPS gives Expando PPS low levels of flammability, toxicity, smoke generation and hard vacuum offgassing. Because of its high use temperature, Expando PPS resists damage from high temperature air guns used with heat-shrinkable elements such as strain reliefs, terminations and identification sleeves.

Expando PPS is 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.

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



Our manufacturing sites are certified ISO 9001, IATF 16949, or AS/EN 9100, ISO 14001 and ISO 45001 (Selected Sites)

# Performance Data – Expando® PPS

Property	Test Method	Result
Operating Temperature Range		-70°C to +200°C (-94°F to +392°F)
Low Temperature Flexibility	MIL-DTL-23053E	-70°C
Flammability	UL 1441 FAR Part 25	VW-1 Pass
Smoke Density	ASTM E-662	Dmax < 50
Hard Vacuum TML CVCN	ASTM E-595	Meets industry limits: 1.0% max 0.1% max
Fluid Resistance Jet Fuel JP-4 (MIL-T-5624) Hydraulic Fluid (MIL-H-5606) Lube Oil (MIL-I-7808) De-Ice Fluid (MIL-A-8243) Reference Oil #2 (ASTM D-471) Salt Water (O-S-1926)	MIL-DTL-23053	No visible degradation Maintains >90% tensile retention

All numeric performance data shows average or typical values. Please consult your sales representative for product drawings, test reports and OEM approvals.

## Product Specifications

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

Commercial Part Number	Recommended Application Range mm (in)		Maximum Weight g/m (lb/ft)	Standard Packaging m (ft)
	Min Ø	Max Ø		
Expando PPS 3-X	2 (1/16")	6 (1/4")	3.44 (0.0023)	610 (2,000')
Expando PPS 6-X	3 (1/8")	13 (1/2")	5.89 (0.0040)	305 (1,000')
Expando PPS 13-X	7 (9/32")	19 (3/4")	12.11 (0.0081)	152 (500')
Expando PPS 19-X	13 (1/2")	32 (1-1/4")	14.24 (0.0096)	152 (500')
Expando PPS 32-X	25 (1")	45 (1-3/4")	26.34 (0.0177)	76 (250')
Expando PPS 45-X	32 (1-1/4")	64 (2-1/2")	28.72 (0.0193)	76 (250')

X = Color Code: 0 = Black 9 = Natural

## Part Numbering System

Example	Product Name	Size	Color	Quantity
	Expando PPS	3	0 (black)	610m



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