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Expando® 686DM is an expandable oversleeve designed for mechanical protection in temperature extremes and hostile environmental conditions. Rated to +200°C (+392°F), Expando 686DM meets VW-1 and FAR Part 25 flammability requirements. Featuring a dual monofilament construction, Expando 686DM blends larger PEEK (polyetheretherketone) guard strands with PPS (polyphenylene sulfide) support strands. The inherent properties of the raw materials give Expando 686DM low levels of flammability, toxicity, smoke generation and hard vacuum off gassing. 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. Expando® products are tough, lightweight oversleeves used to protect cable assemblies, hoses and wire harnesses from chafing, cutting and abrading. The braided



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.

Product facts of braided sleeve EXPANDO 686DM

- Halogen free
- VW-1 according to UL 1441
- FAR 25
- Outstanding abrasion protection
- Low toxicity, smoke generation and off gassing
- Does not trap heat or humidity
- Rot-free

Property	Test Method	Result
Operating Temperature		-70°C to +200°C (-94°F to +392°F)
Low Temperature Flexibility	MIL-DTL-23053E	-70°C
Flammability	UL 1441	VW-1
	FAR Part 25	Pass
Smoke Density	ASTM E-662	Dmc = 2.3
Oxygen Index	ASTM D-2863	36.5%
Hard Vacuum	ASTM E-595	Meet industry limits:
- TML		1.0% max.
- CVCM		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

This datasheet is issued without guarantee according to the correctness of the containing information, product and service descriptions. The data has been carefully checked, Raytronics AG is not liable for any loss or damage resulting from errors or omission in hereby contained information.

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Dimensions in mm

Part Number	Diam	eter	Weight	Packing unit
	min.	max.	g/m	
Expando 686 DM 3-9	2.00	6.00	209	600
Expando 686 DM 6-9	3.00	11.00	447	300
Expando 686 DM 10-9	5.00	19.00	925	150
Expando 686 DM 13-9	6.00	22.00	1194	150
Expando 686 DM 19-9	13.00	35.00	1790	150
Expando 686 DM 32-9	19.00	45.00	2387	75
Expando 686 DM 45-9	25.00	57.00	2685	75
Expando 686 DM 51-9	38.00	57.00	4476	75
Expando 686 DM 64-9	48.00	76.00	5072	75

Standard Colours (white available on request)

Colour	White	Black
Ordering Code	-9	-0



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Federal Mogul, Tenneco, Bentley Harris