

shrinkHOoP

Cable Clamp Heat-Shrink Grommet

Product Facts

- Less assembly time
- Superior strain-relief
- Fewer errors — less rework
- No build-up taping or feeding wire through grommet
- Typical installation in just 10-20 seconds
- Re-expandable I.D. allows wire addition to a cable bundle



Applications

shrinkHOoP grommet (URHR) is an ultra high ratio heat-shrinkable-strain-relief grommet that can be placed over the cable assembly after the connector pinning operation is completed. The ultra-high expansion ratio material conveniently fills the space between the clamp type connector accessory and the cable. (When clamped into position, shrinkHOoP grommet provides strain relief that is more consistent and convenient than many conventional practices — for example, taping, grommet, or tape/grommet combination). The high ratio conformity of shrinkHOoP grommets will match most

typical cable configurations from single conductor to the high density multiple conductor arrangements.

With shrinkHOoP grommet, repairs and rework are a snap – simply heat the grommet until soft, slide a NON-METALLIC probe through the center of the wire bundle (enlarging the grommet I.D.). Once cooled, the grommet will remain open allowing wires to be added, removed or reworked. The system can then be checked, the grommet reheated (shrinking it down again), positioned, and clamped in place.

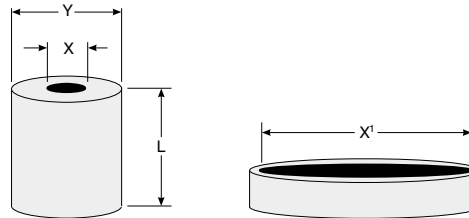
Operating Temperature Range

-55°C to 135°C
[-67°F to 275°F]

shrinkHOoP (Continued)

Specifications/Approvals

RW



Product Dimensions
Inches (millimeters)

Part No.	I.D. Expanded (X1) min.	I.D. Recovered (X) max.	O.D. (Y) Ref.	Length (L) Ref.	Wt. (gm) Ref.	Notes
URHR-1	1 [25]	.08 [2.1]	0.25 [6]	0.5 [13]	0.75	
URHR-2	1.23 [31]	.10 [2.6]	0.375 [10]	0.5 [13]	1	
URHR-3	1.44 [37]	.14 [3.6]	0.5 [13]	0.5 [13]	1.5	
URHR-4	1.85 [47]	0.18 [4.7]	0.562 [14]	0.75 [19]	3.5	
URHR-5	2 [51]	0.20 [5.1]	0.812 [21]	0.75 [19]	5	

a) Recovered length will allow for 1.91 [0.075] either side of the collar, minimum in most cases.

Typical shrinkHOoP Grommet Performance

	Property	Performance	Test Method
Physical	Tensile strength	1500 psi (10.3 Mpa)	ASTM D-412
	Ultimate elongation	250% minimum	ASTM D-412
	Specific gravity	1.4 maximum	ASTM D-792
	Water absorption	0.5 % maximum	ASTM D-570 A
	Flammability	Pass	ASTM D-635
	Corrosion resistance	Pass	ASTM D-2671 A
	Low temperature flex 4 hours at - 55±1°C [67±2°F]	Pass	ASTM D-2671 C
	Heat resistance	200% ultimate elongation, minimum	ASTM D-2671
	168 hrs at 175±1°C [347±2°F]	1200 psi (8.3 Mpa) tensile strength, minimum	
Elastic Memory	Heat shock 4 hrs at 225±2°C [437±5°F]	No cracking, dripping or flowing	ASTM D 2671
		275% minimum expansion to 4 inch (10 cm) of a fully recovered test specimen, and 93% recovery of expanded specimen after oven conditioning for 1 minute at 150±2°C[302 ± 4°F]	—
Electrical	Dielectric strength	200 v/mil (7880 v/mm) minimum	ASTM D-876
	Volume resistivity	10 14 ohm-cm minimum	ASTM D-257
Chemical Fluid Resistance		200% ultimate Elongation, minimum 1200 psi (8.3 Mpa) tensile strength, minimum	ASTM F-146
	Flammability*	Avg. flame time = 30 sec. max Avg. burn length = 3 in. max. Avg. flame time from drippings = 3 sec. max	FAR part 25, Appendix F, part 1 (a), section 3

*Applies to sizes 2, 3, and 4 only

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Selection Chart

Connector Series	Connector Size				
	8 (9)	10, 12 (11, 13)	14, 16 (15, 17)	18, 20 (19, 21)	22, 24, 28*
MIL-C-5015					
MS3451, 52, 56, 59	1	2	3	4	5
MS3450	2	3	4	5	*
MIL-C-26500**					
MS24266	1	2	3	4	5
MS24264, 265	2	3	4	5	*
MIL-C-26482					
MS3120, 21, 22, 26	1	2	3	4	5
MS3470, 71, 74, 75, 76	1	2	3	4	5
MS3124, MS3472	2	3	4	5	*
MIL-C-83723 Series I					
M83723/01 & 02, 05 & 06	1	2	3	4	5
07 & 08, 13 & 14, 23 & 24	1	2	3	4	5
M83723/03 & 04	2	3	4	5	*
MIL-C-83723 Series II					
M83723/17 & 18, 23 & 24	1	2	3	4	5
M83723/12 & 20, 21 & 22	2	3	4	5	*
MIL-C-83723 Series III					
M83723/71 & 72 thru 97 & 98	1	2	3	4	5
M83723/66, 67, 68 & 69	2	3	4	5	*
MIL-C-38999 Series I					
MS27469	1	2	3	4	5
MS27466, 68, 96, 27505, 27656	2	3	4	5	*
MIL-C-38999 Series II					
MS27472, 97, 98, 27508, 27513	1	2	3	4	5
MS27473, 84, 27474	2	3	4	5	*
MIL-C-38999 Series III					
38999/26	1	2	3	4	5
38999/20, 24	3	4	5	5	*
Boeing					
BACC45, F, M, N, P, R, S, T	—	2	3	4	5
BACC 63X	—	3	4	5	*
Boeing					
DC39, 31, 34, 35, 50-57	1	2	3	4	5
DC32, 33, 36, 37, 60, 61, 62, 63	2	3	4	5	*

* Consult TE for availability of larger sizes.

** Note: cable support clamp I.D. may effect the size of shrinkHOoP grommet selected.