

INCH-POUND

MIL-DTL-22529/2B  
 6 February 1998  
 SUPERSEDING  
 MIL-DTL-22529/2A  
 23 September 1997

## DETAIL SPECIFICATION SHEET

## GROMMET, CUSHION, COMPOSITE, EDGING

This specification is approved for use by all Departments and Agencies of the Department of Defense

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of MIL-DTL-22529 listed in that issue of the Department of Defense Index of Specification and Standards (DoDISS) specified in the solicitation.

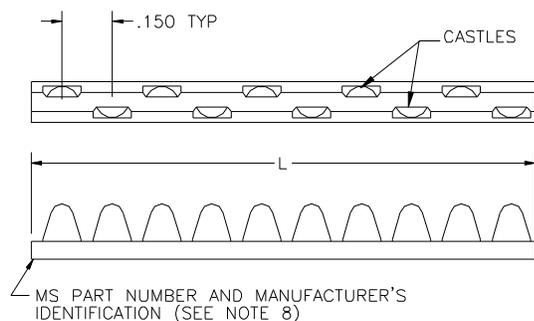


FIG. 1

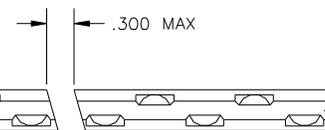
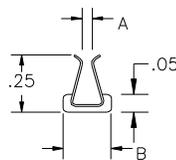
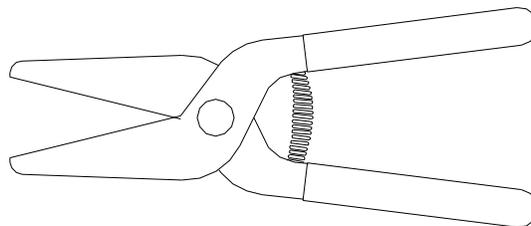


FIG. 2



SHEARS, FULL BYPASS

MFE-100

FIG. 3

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and data which may improve this document should be sent to: Defense Industrial Supply Center, attn.: DISC-ECC, 700 Robbins Avenue, Philadelphia, PA 19111-5096.

## MIL-DTL-22529/2B

Table 1 Military Specification Part number & Cross reference						
Military Standard		Sheet Thickness A	Unit Length L	B	Device Technologies, Inc.  Marlborough, MA 01752 Cage Code 0-HES-0 Part Number	
Part Number	Dash Variation				BTn-0025	-ER0602
M22529/2	-1R-25	.025	25 FT.	.20 0	BT1-0025	-ER0602
	-1R-100	.036	100 FT.		BT1-0100	
	-2R-25	.036	25 FT.		BT2-0025	
	-2R-100	.063	100 FT.		BT2-0100	
	-3R-25	.059	25 FT.	BT3-0025		
	-3R-100	.074	100 FT.	BT3-0100		
	-4R-25	.070	25 FT.	BT4-0025		
	-4R-100	.093	100 FT.	BT4-0100		
	-5R-25	.090	25 FT.	.24 0	BT5-0025	
	-5R-100	.111	100 FT.		BT5-0100	
	-6R-25	.105	25 FT.		BT6-0025	
	-6R-100	.134	100 FT.		BT6-0100	
	-7R-25	.178	25 FT.	.32	BT7-0025	
	-7R-100	.198	100 FT.		BT7-0100	
	-8R-25	.240	25 FT.	.38	BT8-0025	
	-8R-100	.260	100 FT.		BT8-0100	
-nC	--		--	BTn-0085	-EC0602	
MFE-100		Shears Full bypass		#830		

Table 2 Circular hole grommet edging cut lengths		
Note: cut length is a multiple of .15 inches (Fig 1)		
Nominal Hole Diameter Reference	Cut Length	
	L Length	Number of Castles
2.000	6.00	40
2.250	6.90	46
2.500	7.65	51
2.750	8.40	56
3.000	9.15	61
3.250	10.05	67
3.500	10.80	72
3.750	11.55	77
4.000	12.30	82
4.250	13.20	88
4.500	13.95	93
4.750	14.70	98
5.000	15.45	103
5.250	16.35	109
5.500	17.10	114
5.750	17.85	119
6.000	18.60	124

## Requirements:

## 1 Materials:

1.1 Substrate: -1 thru -7, ¼ hard 300 series stainless steel per AMS 5517, AMS 5903, AMS 5907 or AMS 5310; -8, ½ hard 300 series stainless steel per AMS 5518, AMS 5904 or AMS 5911.

1.2 Coating: Thermosetting epoxy, color: lime green per FED-STD-595, color number 14553

1.2.1 Elastomer Cushion: Shore A, 46 Durometer. Flammability per MIL-STD-202, Method 111A; color: Grey

1.2.2 Elongation: No cracks shall be visible at 15% elongation.

1.2.3 Thermal endurance: 85°C continuous (2,000 Hrs) per IEEE 57.

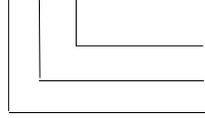
2 The composite cushion grommet meets all the requirements of MIL-DTL-22529(AS) with the following exception: Dielectric with-standing voltage, 1200 volts at 60 Hz. This grommet is primarily intended to provide chafing protection.

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## 3 Examples of Part Number:

## 3.1 Reels

M22529/2 -4 R -25 (BT4-0025-ER0602)



Length in feet  
Reel  
Sheet thickness  
.070"-.093"

M22529/2 -6 R -100 (BT6-0100-ER0602)

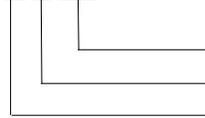


Length in feet  
Reel  
Sheet thickness  
.105"-.134"

## 3.2 Cut lengths:

Cut Lengths are available in increments of .15". EXAMPLE: Calculated Length: 4.10" dia. Hole  $\times \pi = 12.88"/.15 = 85.87$  castles, cut shorter to the nearest whole castle.

M22529/2 -1 C -85 (BT1-0085-EC0602)



Number of Castles  
Factory Precut Length  
Sheet Thickness .025 - .036

Notes:

1 Tolerances: .XX =  $\pm .02$ ; .XXX =  $\pm .010$

2 Within a given sheet thickness range and spring characteristic of the grommet, end user should determine the grommet size by trial.

3 In applications where a sacrificial surface is desirable the cushion grommet may be used for edge dressing, odd-shaped holes, and circular holes to provide chafing protection.

## 4 Installation:

4.1 To assure the absence of deformation of adjacent gripping fingers (Castles) proximate to the cut-off, using the MFE-100 shears, support the grommet on both sides of the cut and cut at an angle of approximately  $45^\circ$  per figure 2.

4.2 The maximum allowable end gap for odd-shaped and circular holes after grommet edging is installed flush against the hole periphery is per Fig 2.

4.3 Installation instructions are to be included with each package.

4.4 When installing grommets, the gap (joint) shall be ideally located at the top of the cutout hole. Avoid locating joints in the lower half of the cutout hole.

5. U.S. Patent No's 4,769,966 and 5,343,669 expire 20 April 2007 and 6 July 2012 respectively. Other U.S. and foreign patents pending. The Government does not have a royalty-free license.

6 The military detail part number, single-digit dash variation, and manufacturer's identification to be printed and repeated on the surface of the grommet at least every 10.6 in. per Fig 1.

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7 Changes from previous issue: The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last issue.

Custodians:

Navy - AS  
Air Force - 99

Preparing Activity:

DLA-IS

(Project 5325-0400-02)

Review Activities:

Air Force - 82