

INCH-POUND

MS27070E

1 May 2013

SUPERSEDING

MS27070D

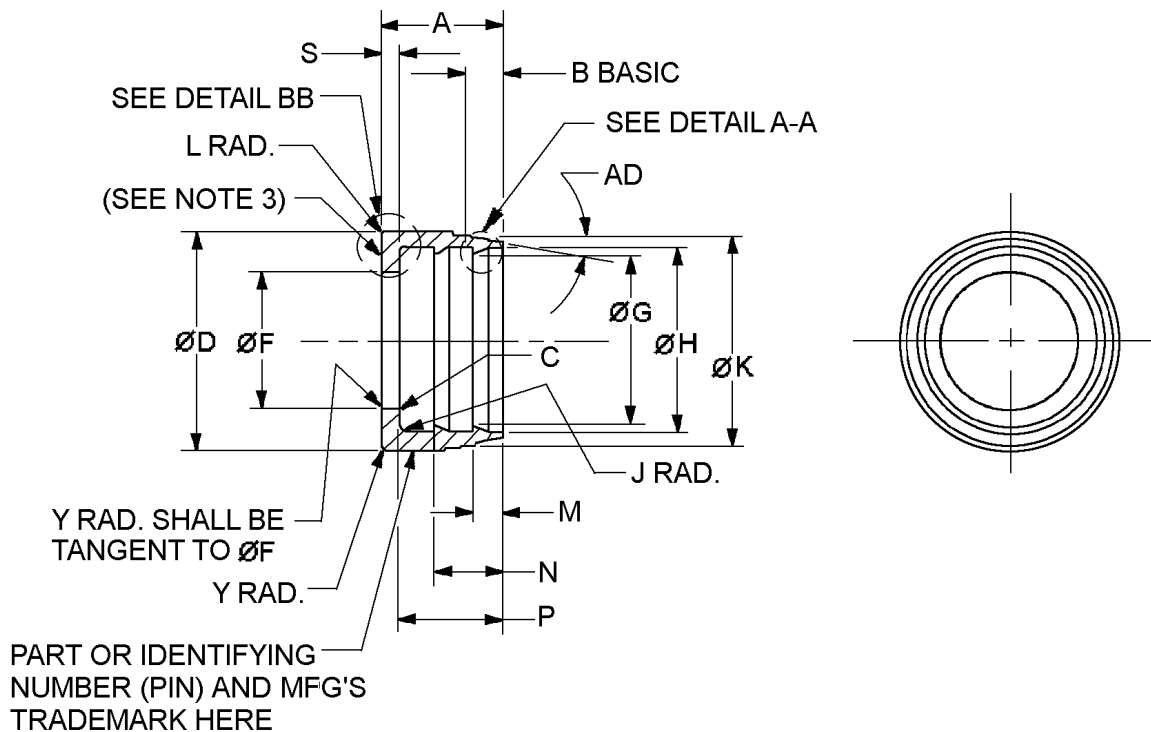
24 September 2003

## DETAIL SPECIFICATION SHEET

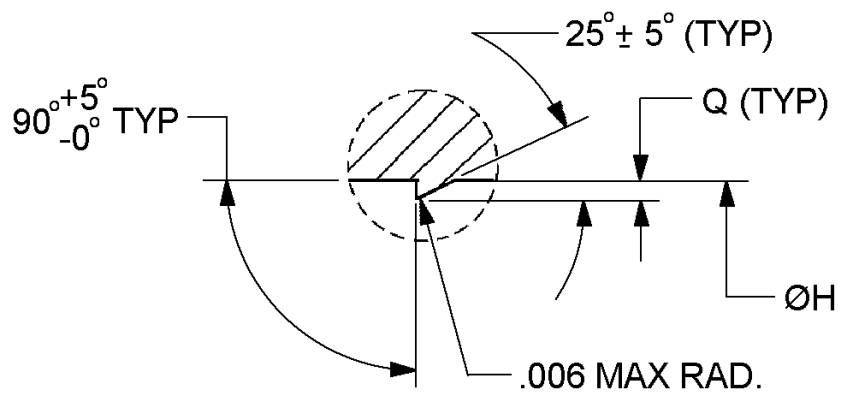
## SLEEVE, HOSE COUPLING

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

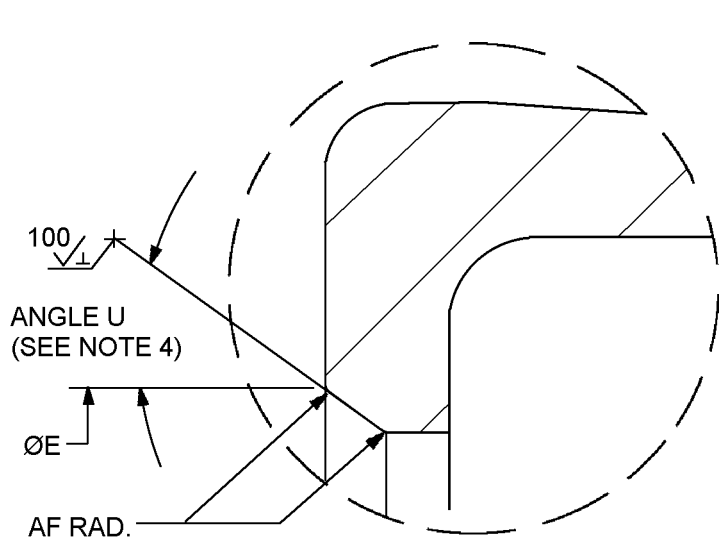
The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-27272.

FIGURE 1. Sleeve illustration.

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DETAIL AA ENLARGED

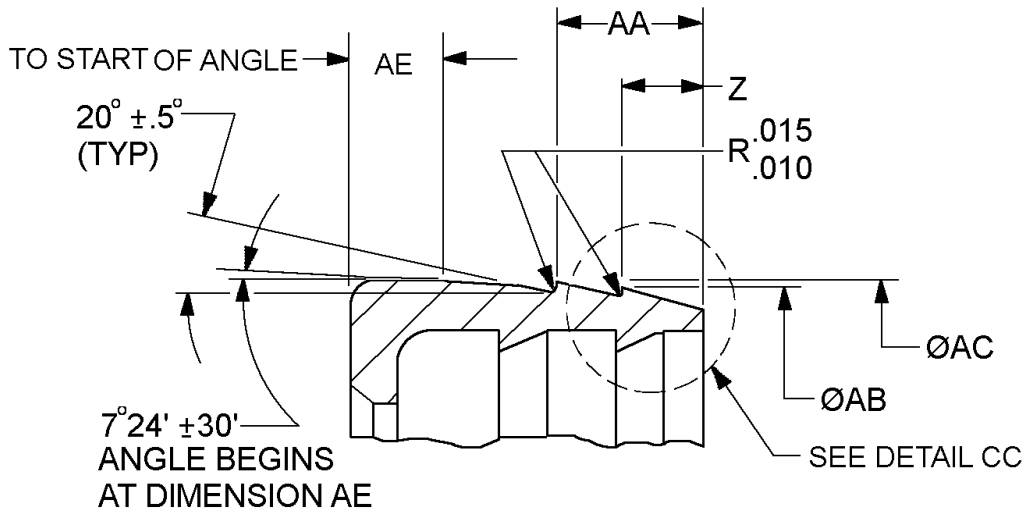


Inches mm  
.006 0.15

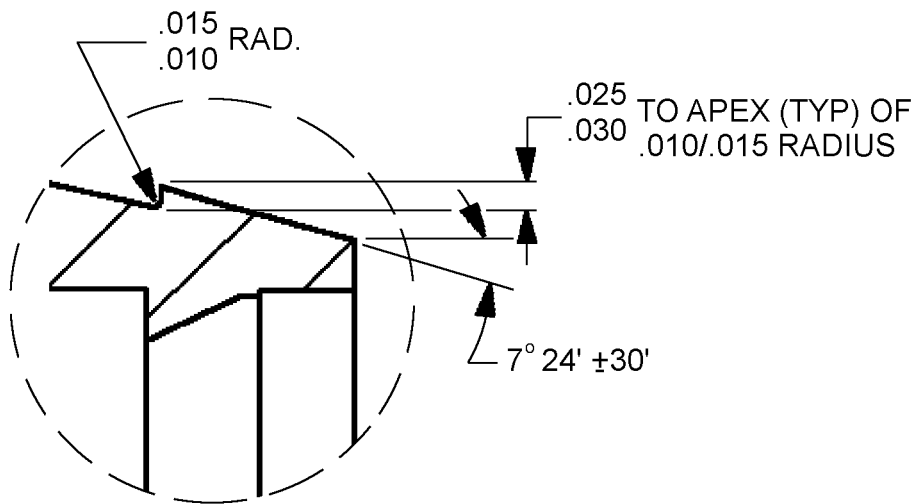
DETAIL BB ENLARGED  
-10 THRU -24 SIZE ONLY

FIGURE 1. Sleeve illustration - Continued.

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-24 SIZE ONLY



DETAIL CC ENLARGED

Inches	mm
.010	0.25
.015	0.38
.025	0.64
.030	0.76

FIGURE 1. Sleeve illustration - Continued.

Size and material code	A ±.005	B	C	D +.000 -.005	E ±.005	F		G		H		J max
-4C	.285	.0850	.005 max break	.375	---	.211	+.006 -.000	.266	+.005 -.000	.290	±.005	.015
-5C		.0757		.437	---	.274		.329	+.006 -.000	.356		
-6C		.0815		.500	---	.336		.390		.415		
-8C		.0955		.625	---	.432		.491		.525		
-10C	.380	.1134	---	.745	.585	.532	+.004 -.000	.596	+.006 -.000	.631	---	
-12C	.400	.1099		.875	.715	.658		.728		.765		
-16C	.500			1.155	.985	.908		.978		1.013		
-20C	.740	.1381		1.470	1.225	1.160		1.233		1.268		
-24C	.760	---	---	1.740	1.490	1.410	-.000	1.520	+.005	1.555	±.002	---

Size and material code	K ±.003	L		M ±.005	N ±.005	P ±.005	Q ±.002	S		U ±.5° see note 4	Y +.005 -.000
-4C	.344	---	---	.060	.160	---	.012	.050	+.005 -.000	---	.040
-5C	.408	---	---			---					
-6C	.468	---	---			---					
-8C	.589	-	---	.100	.225	---	.016	.055	±.005	---	
-10C	.703	---	---			---		.080			
-12C	.834	---	---			---		.100			
-16C	1.084	.005	+.015 -.000			---		.370		---	
-20C	1.359			---	---						
-24C	---			.010	max	.190	.340	.590	---	---	

FIGURE 1. Sleeve illustration - Continued.

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Size and material code	Z ±.005	AA ±.005	AB ±.005	AC ±.005	AD ±.25°	AE ±.005	AF +.005 -.000
-4C	---	---	---	---	10°	---	---
-5C	---	---	---	---		---	
-6C	---	---	---	---		---	
-8C	---	---	---	---		---	
-10C	---	---	---	---		---	
-12C	---	---	---	---		---	
-16C	---	---	---	---		---	
-20C	---	---	---	---		---	
-24C	.174	.298	1.658	1.690		---	.260

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Hardness shall be tested anywhere on the face that the arrow for "see note 3" is pointing to.
4. Surface must be free from longitudinal scratches, nicks, or tool marks.
5. Dimensions and tolerances. Dimensions are in inches. Unless otherwise specified, break or radius all corners .005, +.005, -.000. All diameters shall be concentric within .005 full indicator movement.
6. Remove all burrs and slivers.
7. Surface roughness. Unless otherwise specified, maximum surface roughness shall not exceed 125 $\mu$  inch Ra in accordance with ASME B46.1.

FIGURE 1. Sleeve illustration - Continued.

## REQUIREMENTS

Dimensions and configuration see figure 1.

Intended use. This part is a component of MS27053 through MS27060 and MS27381 through MS27385.

Material. Corrosion-resistant steel, 17-4PH in accordance with SAE-AMS5643. Heat treat to condition H-1150 with hardness of Rockwell C-28 to C-37 or condition H-1075 with hardness of Rockwell C-31 to C-38. Hardness to be tested on surface indicated when sleeve is heat treated in the final machined configuration, see figure 1.

Finish. Passivate in accordance with SAE-AMS2700 method 1, type 1 or 2. Do not dry-film lubricant sizes 4, -5, and -6. On other sizes, dry-film lubricate radius Y and angle U; dry-film lubrication on D diameter and F diameter is acceptable; dry-film lubrication on taper AD not acceptable; and dry film lubrication beyond AE dimension on size -24 is not acceptable. Dry-film lubricate, see table I.

NOTE: Avoid using graphite dry film lubes with aluminum sleeves because in a wet environment, graphite becomes corrosive to the aluminum.

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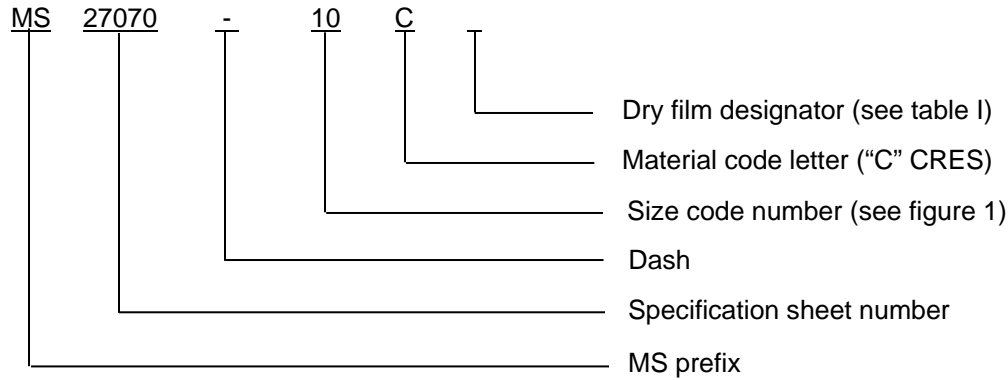
TABLE I. Solid film designator.

Dry film designator	SAE class or type designator	Dry film characteristics
Blank	Any SAE class or type below	N/A
SAE-AS1701	SAE-AS1701 class	SAE-AS1701 temperature ranges °F (°C)
4	4	-65° to +1400°F (-54° to 760°C)
5	5	-65° to +850°F (-54° to 454°C)
6	6	-375° to +850°F (-226° to 454°C)
SAE-AS5272	SAE-AS5272 type	SAE-AS5272 temperature ranges. °F (°C)
7	Type I	-90° to 400°F (-68 to 204°C) endurance life of 250 min minimum
8	Type II	-90° to 400°F (-68° to 204°C) endurance life of 450 min minimum
9	Type III	Color 1 - Natural product color -90° to 400°F (-68 to 204°C) low Volatile organic compound with an endurance life of 450 min minimum
10	Type III	Color 2 - Black color -90° to 400°F (-68 to 204°C) low Volatile organic compound with an endurance life of 450 min minimum
Dry film designator	MIL classification	Dry film characteristics
MIL-PRF-46010 1/	---	MIL-PRF-46010 temperature ranges. °F (°C)
11	1	Color 1 natural product color, -90° to 400°F (-68 to 204°C) solvent resisting
12	2	Color 2 - Black color -90° to 400°F (-68 to 204°C) solvent resisting

1/ Not for aerospace usage.

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PIN: The PIN consists of prefix "MS", the specification sheet number, dash number for sleeve size, letter for material, and a blank or number for dry film lubricate. Unassigned PIN's shall not be used.



PIN examples:

MS27070-10C indicates a sleeve size 10, CRES with dry film class designator "blank".  
 MS27070-10C4 indicates a sleeve size 10, CRES with dry film class designator 4.

Identification of product. The PIN and the manufacturer's trademark shall be permanently marked on the part.

Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

Referenced documents shall be of the issue in effect on date of invitations for bid.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue, due to the extent of the changes.

Referenced documents. In addition to MIL-DTL-27272, this document references the following:

MIL-PRF-46010	MS27382
MS27053	MS27383
MS20754	MS27384
MS20755	MS27385
MS20756	ASME B46.1
MS20757	SAE-AMS2700
MS20758	SAE-AMS5643
MS20759	SAE-AS1701
MS27060	SAE-AS5272
MS27381	

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CONCLUDING MATERIAL

Custodians:

Army - AV  
Navy - AS  
Air Force - 99  
DLA - CC

Preparing activity:

DLA - CC

(Project 4730-2013-023)

Review activities:

Army - AR, AT, MI  
Navy - MC, SA, SH  
Air Force - 71

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.