

INCH-POUND

MS87006A

11 July 2018

SUPERSEDING

MS87006

16 October 1962

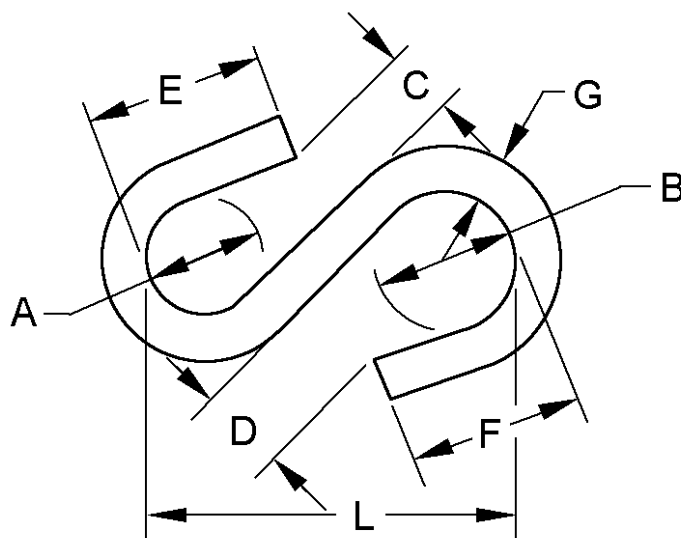
## DETAIL SPECIFICATION SHEET

### HOOK, CHAIN-S

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

Reactivated after 11 July 2018 and may be used for new and existing designs and acquisitions.

The requirements for acquiring the product described herein shall consist of this specification sheet.



See notes at end of figure.

FIGURE 1. S-Hook.



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|                       |       |       |        |        |        |        |        |
|-----------------------|-------|-------|--------|--------|--------|--------|--------|
| Wire gage<br>G        | 14    | 12    | 12     | 11     | 11     | 10     | 8      |
| Diameter<br>(decimal) | .080  | .105  | .105   | .120   | .120   | .134   | .162   |
| L Reach               | 27/32 | 15/16 | 1-3/32 | 1-7/16 | 1-7/16 | 1-1/16 | 1-1/16 |
| A dia.                | 9/32  | 9/32  | 25/64  | 9/32   | 13/32  | 11/32  | 3/8    |
| B dia.                | 5/16  | 5/16  | 13/32  | 11/16  | 11/16  | 11/32  | 3/8    |
| C                     | 1/8   | 11/64 | 3/32   | 9/32   | 5/16   | 3/16   | 1/4    |
| D                     | 3/16  | 3/16  | 1/8    | 13/32  | 9/16   | 1/4    | 9/32   |
| E                     | 13/32 | 15/32 | 1/2    | 9/16   | 5/8    | 17/32  | 9/16   |
| F                     | 3/8   | 13/32 | 15/32  | 13/16  | 7/8    | 1/2    | 9/16   |

## Decimal and metric equivalents. 2/

|           |         |         |         |         |         |         |         |
|-----------|---------|---------|---------|---------|---------|---------|---------|
| Diameter  | .080    | .105    | .105    | .120    | .120    | .134    | .162    |
| Inch (mm) | (2.03)  | (2.67)  | (2.67)  | (3.05)  | (3.05)  | (3.40)  |         |
| L Reach   | .844    | .938    | 1.094   | 1.438   | 1.438   | 1.063   | 1.063   |
| Inch (mm) | (21.44) | (23.83) | (27.79) | (36.53) | (36.53) | (27.00) | (27.00) |
| A dia.    | .281    | .281    | .391    | .281    | .406    | .406    | .375    |
| Inch (mm) | (7.14)  | (7.14)  | (9.93)  | (7.14)  | (10.31) | (10.31) | (9.53)  |
| B dia.    | .313    | .313    | .406    | .688    | .688    | .406    | .375    |
| Inch (mm) | (7.95)  | (7.95)  | (10.31) | (17.48) | (17.48) | (10.31) | (9.53)  |
| C         | .125    | .172    | .094    | .281    | .313    | .188    | .250    |
| Inch (mm) | (3.18)  | (4.38)  | (2.39)  | (7.14)  | (7.95)  | (4.78)  | (6.35)  |
| D         | .188    | .188    | .125    | .406    | .563    | .250    | .281    |
| Inch (mm) | (4.78)  | (4.78)  | (3.18)  | (10.31) | (14.30) | (6.35)  | (7.14)  |
| E         | .406    | .468    | .500    | .563    | .625    | .531    | .563    |
| Inch (mm) | (10.31) | (11.89) | (12.70) | (14.30) | (15.88) | (13.49) | (14.30) |
| F         | .375    | .406    | .469    | .813    | .875    | .500    | .563    |
| Inch (mm) | (9.53)  | (10.31) | (11.91) | (20.65) | (22.23) | (12.70) | (14.30) |

## NOTES:

1. Dimensions are in inches.
2. Decimal and metric equivalents are for reference only.
3. Tolerance for decimals  $\pm .005$  inch (0.13 mm) and fractions  $\pm 1/16$  inch (.0625 inch decimal (1.59 mm)).

FIGURE 1. S-Hook - Continued.

## REQUIREMENTS:

S-Hooks shall be as specified on figure 1, table I, and table II.

Materials: See table I.

Brass alloy C26000, half-hard temper.

Low carbon steel alloy UNS G10100 or UNS G10200.

Corrosion resistant steel (CRES) alloy UNS S30400.

Finish: See table I.

Cadmium plating in accordance with SAE-AMS-C-81562, type II, class 3 or SAE-AMS-QQ-P-416, type II, class 3.

Mechanically deposited zinc coating in accordance with ASTM-B695, class 50, type II (chromate) or zinc coating (electrodeposited) in accordance with ASTM-B633, Fe/Zn 12, type VI.

Electrodeposited zinc-nickel in accordance with ASTM F1941, Fe/Zn-Ni 5C 5CNS, 5DNS, or 5ENS

CRES shall be passivated in accordance with SAE-AMS2700, method 1, type 6 or 7.

TABLE I. Material and finish designators.

| Material/finish           | Dash numbers |     |     |     |     |     |     |
|---------------------------|--------------|-----|-----|-----|-----|-----|-----|
| Steel                     |              |     |     |     |     |     |     |
| Uncoated                  | -1           | -11 | -21 | -31 | -41 | -51 | -61 |
| Cadmium <u>1</u> /        | -3           | -13 | -23 | -33 | -43 | -53 | -63 |
| Zinc <u>2</u> /           | -4           | -14 | -24 | -34 | -44 | -54 | -64 |
| Zinc-nickel               | -6           | -16 | -26 | -36 | -45 | -56 | -66 |
| Brass                     |              |     |     |     |     |     |     |
| Uncoated                  | -2           | -12 | -22 | -32 | -42 | -52 | -62 |
| Corrosion resistant steel | -5           | -15 | -25 | -35 | -45 | -55 | -65 |

NOTE:

1. See table II for color designators.
2. This finish has a chromate conversion coating, which includes hexavalent chromium, which is toxic, carcinogenic, highly regulated, and typically prohibited in Army contracts.

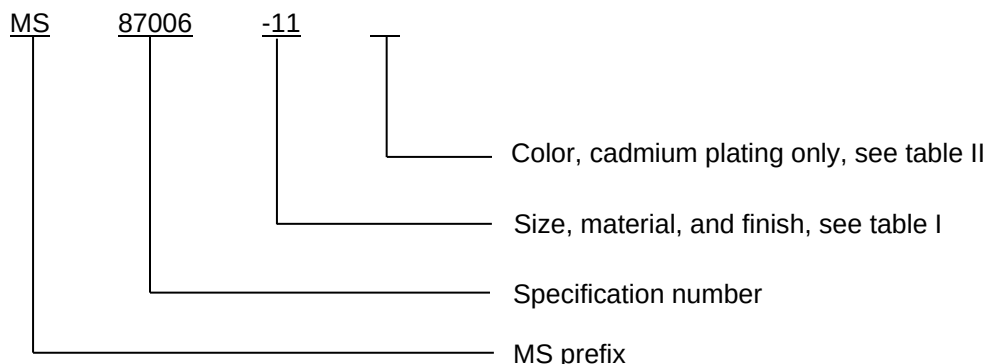
TABLE II. Cadmium color designators.

| Color designator | Color                                  |
|------------------|----------------------------------------|
| Blank            | No or any color                        |
| C                | Yellow iridescent                      |
| D                | Olive green shading to brown or bronze |
| E                | Black                                  |

S-Hook shall be capable of being bent with hand tools, in the closed position, and shall not crack or break.

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PIN: The PIN consists of the letters "MS", the specification number, a dash and number for S-hook wire gage, material/finish designator, and color for cadmium plated S hooks only.



PIN example: MS87006-11 indicates an S-Hook, steel alloy 12 AWG with a 15/16 inch reach, steel uncoated.

Cadmium is not recommended. To the users of this document, it is recommended that the use of carbon steel material with cadmium plating be used only when other materials and finishes specified in this document cannot meet performance requirements.

Cadmium is prohibited from use in NAVSEA owned shipboard systems in accordance with the requirements of T9070-AL-DPC-020/077-2.

Class I and II ozone depleting substances (ODS) shall not be used in MS87006 or any referenced procedures.

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. This document references the following:

|             |                        |
|-------------|------------------------|
| ASTM B633   | SAE-AMS-C-81562        |
| ASTM-B695   | SAE-AMS-QQ-P-416       |
| ASTM F1941  | T9070-AL-DPC-020/077-2 |
| SAE-AMS2700 |                        |

CONCLUDING MATERIAL

Custodians:

Army - AT  
Navy - SH  
Air Force - 99  
DLA - CC

Preparing activity:

DLA - CC

(Project 4030-2018-004)

Review activities:

Army - AR, MI  
Navy - AS, CG, SA  
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>.