

FED. SUPPLY CLASS

5120

**1. SCOPE**

1.1 Scope. This specification establishes the requirements for the manufacture and acceptance of ribbed screwdriver bits and bit assemblies used for installation and removal of recess drive fasteners.

**2. APPLICABLE DOUMENTS**

2.1 Government documents

2.1.1 Specifications, standards and handbooks. The following specifications, standards and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto cited in the solicitation.

**SPECIFICATIONS**

Federal

PPP-P-40 Packaging and Packing of Hand Tools  
QQ-T-570 Tool Steel, Alloy

**STANDARDS**

Military

MIL-STD-129 Marking for Shipment and Storage

Copies can be obtained from the Department of Defense Single Stock Point (DODSSP). <http://dodssp.daps.dla.mil>

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted shall be those listed in the issue of the DoDISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

American Society for Quality

ANSI/ASQ Z1.4 Sampling Procedures and Tables of Inspection by Attributes

Copies can be obtained from the American Society for Quality, 600 North Plankinton Ave., Milwaukee, WI 53203. [www.asq.org](http://www.asq.org)

ASTM International

ASTM A681 Standard Specification for Tool Steels Alloy  
ASTM E18 Standard Test Methods for Rockwell Hardness of Metallic Materials

Copies can be obtained from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. [www.astm.org](http://www.astm.org)

① COMPLETELY REVISED

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MIL-B-85643(AS).

|                                       |                                                                          |                                                     |
|---------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------|
| THIRD ANGLE PROJECTION                | CUSTODIAN<br>NATIONAL AEROSPACE STANDARDS COMMITTEE                      | REVISION<br><b>1</b>                                |
| PROCUREMENT SPECIFICATION<br><br>NONE | TITLE<br><br><b>BITS, SCREWDRIVER, RIBBED, GENERAL SPECIFICATION FOR</b> | CLASSIFICATION SPECIFICATION<br><br><b>ASM85643</b> |

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Aerospace Industries Association

|             |                                                                                                                      |
|-------------|----------------------------------------------------------------------------------------------------------------------|
| NASM1312    | Fastener Test Methods                                                                                                |
| NASM85643/1 | Bit, Screwdriver, Cruciform Ribbed, Cruciform, Insert Type, External Hexagon Shank, Manually Driven                  |
| NASM85643/2 | Bit, Screwdriver, Cruciform, Ribbed, Cruciform, Long Shank, External Hexagon Shank, Power Driven                     |
| NASM85643/3 | Bit, Screwdriver, Torq-Set, Ribbed, Offset Cruciform, External Hexagon Shank, Power Driven                           |
| NASM85643/4 | Bit, Screwdriver, Offset Cruciform, Ribbed, Offset Cruciform Long Shank, External Hexagon Shank                      |
| NASM85643/5 | Bit, Screwdriver, Insert Type, Offset Cruciform, Ribbed, Offset Cruciform, External Hexagonal Shank, Manually Driven |

Copies can be obtained from the Aerospace Industries Association, 1000 Wilson Blvd., Suite 1700, Arlington, VA 22209. [www.aia-aerospace.org](http://www.aia-aerospace.org)

ASME

ASME B46.1 Surface Texture (Surface Roughness, Waviness and Lay)

Copies can be obtained from ASME, Three Park Ave., New York, NY 10016-5990. [www.asme.org](http://www.asme.org)

- 2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein (except for associated detail specifications, specification sheets or NAS standards), the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

### 3. REQUIREMENTS

- 3.1 Specification sheets. The individual bit shall be as specified herein and in accordance with the applicable specification sheets. In the event of any conflict between requirements of this specification and the specification sheet, the latter shall govern.
- 3.2 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3 and 6.5).
- 3.3 Material. The material shall be as specified on the applicable specification sheet.
- 3.4 Dimensions. The dimensions and contour shall be in accordance with the applicable specification sheet. The dimensions and contour gaging test shall be conducted per 4.5.1.
- 3.5 Surface characteristics
- 3.5.1 Finish. All surfaces shall be free of cracks (see 6.4) regardless of depth. The driving blade and drive adapter surfaces shall be free of discontinuities, such as laps (see 6.4) greater in depth than 2 percent of the thinnest material at the discontinuity location, and inclusions (see 4.5.2.1).
- 3.5.2 Smoothness. The driving blade surface shall be not more than 125 microinches. All other surfaces shall be not more than 250 microinches (see 4.5.2.2).
- 3.5.3 Surface treatment. The bit shall be free of material permanently deposited on the surface (such as a plating or coating (see 6.4)). A rust preventive coating shall be applied (see 4.5.2.3).
- 3.6 Hardness. The hardness range of the bit shall be as specified on the applicable specification sheet (see 4.5.3).
- 3.7 Performance
- 3.7.1 Torque fatigue. Using the torque values in the applicable specification sheet, the bits shall be subjected to not less than 50 cycles in both the clockwise and counterclockwise direction (see 4.5.4).

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| <b>NASM85643</b> |
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