



<b>AEROSPACE STANDARD</b>	<b>AS7455™</b>	<b>REV. C</b>
	Issued            1991-02 Reaffirmed       2004-07 Revised            2022-03  Superseding AS7455B	
(R) Bolts and Screws, Steel, Low Alloy, Heat Resistant Hardened and Tempered, Roll Threaded		
FSC 5306		

## RATIONALE

Update document to bring into line with previous updated procurement specifications.

### 1. SCOPE

#### 1.1 Type

This procurement specification covers aircraft quality bolts and screws made from a low alloy, heat resistant steel of the type identified under the Unified Numbering System as UNS K14675. The following specification designations and their properties are covered.

AS7455            140000 to 195000 psi ultimate tensile strength at room temperature.

AS7455-1        140000 to 195000 psi ultimate tensile strength at room temperature, nickel-cadmium plated.

#### 1.2 Application

Primarily for aerospace propulsion system bolt applications where high strength at temperatures up to approximately 900 °F is required and the part is protected against corrosion.

#### 1.3 Safety - Hazardous Materials

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

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<https://www.sae.org/standards/content/AS7455C/>

## 2. REFERENCES

### 2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and 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.

#### 2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

AMS2416	Plating, Nickel-Cadmium, Diffused
AMS2750	Pyrometry
AMS6304	Low-Alloy Steel, Heat Resistant, Bars, Forgings, and Tubing 0.95Cr - 0.55Mo - 0.30V (0.40 - 0.50C)
AS1132	Bolts, Screws, and Nuts - External Wrenching UNJ Thread, Inch - Design Standard
AS3062	Bolts, Screws, and Studs, Screw Thread Requirements
AS3063	Bolts, Screws, and Studs, Geometric Control Requirements
AS6416	Bolts, Screws, Studs and Nuts, Definitions for Design, Testing and Procurement
AS8879	Screw Threads - UNJ Profile, Inch Controlled Radius Root with Increased Minor Diameter

#### 2.1.2 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

MIL-STD-2073-1	Military Packaging, Standard Practice for
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#### 2.1.3 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, [www.astm.org](http://www.astm.org).

ASTM E140	Standard Hardness Tables for Metals
ASTM E1444/E1444M	Magnetic Particle Examination
ASTM E8/E8M	Tension Testing of Metallic Materials

#### 2.1.4 ASME Publications

Available from ASME, P.O. Box 2900, 22 Law Drive, Fairfield, NJ 07007-2900, Tel: 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 973-882-1170 (outside North America), [www.asme.org](http://www.asme.org).

ASME B46.1	Surface Texture (Surface Roughness, Waviness, and Lay)
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### 2.1.5 AIA Publications

Available from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928, Tel: 703-358-1000, [www.aia-aerospace.org](http://www.aia-aerospace.org).

NASM1312-6 Fastener Test Methods, Method 6, Hardness

NASM1312-8 Fastener Test Methods, Method 8, Tensile Testing

NASM1312-12 Fastener Test Methods, Method 12, Plating Thickness

## 2.2 Definitions

Refer to AS6416.

## 2.3 Unit Symbols

A ampere

°F degree Fahrenheit

% percent (1% = 1/100)

lbf pounds force

psi pounds force per square inch

sp gr specific gravity

## 3. TECHNICAL REQUIREMENTS

### 3.1 Material

Shall be AMS6304 steel, unless otherwise specified on the part drawing.

### 3.2 Design

Finished (completely manufactured) parts shall conform to the following requirements:

#### 3.2.1 Dimensions

The dimensions of finished parts shall conform to the part drawing. Dimensions apply after plating but before coating.

#### 3.2.2 Surface Texture

Surface texture of finished parts, prior to plating or coating, shall conform to the requirements as specified on the part drawing, determined in accordance with ASME B46.1.

#### 3.2.3 Threads

Threads shall be in accordance with AS8879, unless otherwise specified on the part drawing.

##### 3.2.3.1 Incomplete Threads

Incomplete threads and runouts as specified in AS3062.

##### 3.2.3.2 Chamfer

Bolts shall be chamfered as specified on the part drawing.