



**Designation: F 836M – 98**  
**METRIC**

## Standard Specification for Style 1 Stainless Steel Metric Nuts<sup>1</sup>

This standard is issued under the fixed designation F 836M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the Department of Defense.*

### 1. Scope

1.1 This specification covers the chemical and mechanical requirements for stainless steel metric nuts with nominal thread diameters M1.6 through M36, and intended for use in engineering applications requiring general corrosion resistance.

1.2 Eight groups of stainless steel alloys are covered, including three austenitic (Grades A1, A2, and A4), one ferritic (Grade F1), three martensitic (Grades C1, C3, and C4), and one precipitation hardening (Grade P1).

1.3 Seventeen property classes are covered, including nine austenitic, one ferritic, six martensitic, and one precipitation hardening. The property classes with the permissible alloys for each are listed in Table 1.

1.4 This specification is based in concept and content on ISO 3506. The chemical and mechanical requirements specified for all property classes, except as given in 1.4.1, are essentially identical with classes of the same designation in ISO 3506.

1.4.1 This specification includes 13 of the 16 property classes covered in ISO 3506. Additionally, it includes property classes A1-70, A2-70, A4-70, A1-80, A2-80, and A4-80 for products with nominal thread diameters larger than M20; and four non-ISO property classes, C1-110, C4-110, C3-120, and P1-90.

1.5 Supplementary requirements of an optional nature are provided, applicable only when agreed upon between the manufacturer and the purchaser at the time of the inquiry and order.

1.6 Suitable bolts, hex cap screws, and studs for use with nuts included in this specification are covered by Specification F 738M. Unless otherwise specified, all bolts, hex cap screws, and studs used with these nuts shall conform to the requirements of Specification F 738M and shall be of the same alloy group.

### 2. Referenced Documents

#### 2.1 ASTM Standards:

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F-16 on Fasteners and is the direct responsibility of Subcommittee F16.04 on Nonferrous Fasteners.

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**TABLE 1 Property Classes of Stainless Steel Nuts**

| Property Class          | Permissible Alloys                      |
|-------------------------|-----------------------------------------|
| A1-50<br>A1-70<br>A1-80 | 304, 304L, 305 <sup>A</sup><br>384, XM7 |
| A2-50<br>A2-70<br>A2-80 | 321, 347                                |
| A4-50<br>A4-70<br>A4-80 | 316, 316L                               |
| F1-45                   | 430 <sup>B</sup>                        |
| C1-70<br>C1-110         | 410                                     |
| C3-80<br>C3-120         | 431                                     |
| C4-70<br>C4-110         | 416, 416Se                              |
| P1-90                   | 630                                     |

<sup>A</sup> When approved by the purchaser, Alloys 303, 303Se, or XM1 may be furnished.

<sup>B</sup> When approved by the purchaser, Alloy 430F may be furnished.

A 262 Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels<sup>2</sup>

A 342 Test Methods for Permeability of Feebly Magnetic Materials<sup>3</sup>

A 380 Practice for Cleaning and Descaling Stainless Steel Parts, Equipment, and Systems<sup>2</sup>

A 493 Specification for Stainless and Heat-Resisting Steel for Cold Heading and Cold Forging Wire<sup>2</sup>

A 555/A 555M Specification for General Requirements for Stainless and Heat-Resisting Steel Wire and Wire Rods<sup>2</sup>

A 564/A 564M Specification for Hot-Rolled and Cold-Finished Age-Hardening Stainless and Heat-Resisting Steel Bars and Shapes<sup>4</sup>

A 582 Specification for Free-Machining Stainless and Heat-Resisting Steel Bars, Hot-Rolled or Cold-Finished<sup>4</sup>

<sup>2</sup> Annual Book of ASTM Standards, Vol 01.03.

<sup>3</sup> Annual Book of ASTM Standards, Vol 03.04.

<sup>4</sup> Annual Book of ASTM Standards, Vol 01.05.