

---

# Standard Specification for Carbon and Alloy Steel Nuts

---

**AASHTO Designation: M 291-06**

**ASTM Designation: A 563-04a**



**American Association of State Highway and Transportation Officials**  
**444 North Capitol Street N.W., Suite 249**  
**Washington, D.C. 20001**

## Standard Specification for

# Carbon and Alloy Steel Nuts



**AASHTO Designation: M 291-06**

**ASTM Designation: A 563-04a**

AASHTO M 291-06 is identical to ASTM A 563-04a except for the following provisions:

1. All references to the ASTM standards contained in ASTM A 563-04a, listed in the following table, shall be replaced with the corresponding AASHTO standard:

| <i>Referenced Standards</i> |              |
|-----------------------------|--------------|
| ASTM                        | AASHTO       |
| A 153                       | M 232M/M 232 |
| A 194/A 194M                | M 292M/M 292 |
| A 325                       | M 164        |
| A 490M                      | M 253        |
| A 709/A 709M                | M 270M/M 270 |
| B 695                       | M 298        |

2. Replace Section 3.1.7 of ASTM A 563-04a with the following:  
3.1.7 AASHTO designation and year of issue, and
3. Replace Note 3 of ASTM A 563-04a with the following:  
**Note 3**—An example of an ordering description follows: 1000 <sup>7</sup>/<sub>8</sub>–9 heavy hex nuts, Grade C, hot-dip zinc-coated, AASHTO M 291-\_\_\_\_.
4. Sections 5.4 and 5.5 of ASTM A 563-04a are not included in AASHTO M 291-06.
5. Replace the last row in Table 3 of ASTM A 563-04a with the following:

|                 |                                                              |           |     |     |     |     |     |     |
|-----------------|--------------------------------------------------------------|-----------|-----|-----|-----|-----|-----|-----|
| DH <sup>D</sup> | <sup>1</sup> / <sub>4</sub> to 1 <sup>1</sup> / <sub>2</sub> | hex thick | 175 | 150 | 248 | 352 | C24 | C38 |
|-----------------|--------------------------------------------------------------|-----------|-----|-----|-----|-----|-----|-----|

6. Add a last sentence to Footnote A in Table 3 of ASTM A 563-04a as follows:  
“When M 292 zinc-coated inch series nuts are supplied, the zinc coating, overtapping, lubrication, and rotational capacity testing shall be in accordance with M 291.”
7. Add a last sentence to Footnote B in Table 3 of ASTM A 563-04a as follows:  
“When M 292 zinc-coated inch series nuts are supplied, the zinc coating, overtapping, lubrication, and rotational capacity testing shall be in accordance with M 291.”
8. Add the following subsection to Section 10 of ASTM A 563-04a.  
10.2 The proof load should be determined at a free running cross head speed not exceeding 1.0 in./min and shall be maintained for 10 seconds before releasing the load.
9. Replace Section 15.2.1.1 of ASTM A 563-04a with the following:  
15.2.1.1 AASHTO designation and grade,
10. Replace Section 16.1 of ASTM A 563-04a with the following:  
16.1 The party responsible for the fastener shall be the organization that supplies the fastener to the purchaser. The responsible party shall supply test reports, certified by the manufacturer, that indicate the fasteners were manufactured, sampled, tested, and inspected in accordance with this specification and meet all of its requirements.