

Did You Know?

COMMON NUTS & BOLTS

SAE International, formerly the Society of Automotive Engineers, is a U.S.-based standards organization that develops technical information for a variety of industries.

ASTM, American Society for Testing and Materials, is an international standards organization that publishes a voluntary consensus for a variety of materials and services.

HEX NUTS

No Grade Mark



ASTM A563 Grade -A

Low carbon steel, general purpose nut.

No Grade Mark



SAE J429 Grade-2

Low or medium carbon steel. For general structural and mechanical applications.



SAE J995 Grade-5

Use with bolts that have a minimum tensile strength equal to or less than the nut's specified proof stress.



SAE J995 Grade-8

For high strength use in industrial and commercial applications. A Grade 8 nut is significantly stronger than a Grade 5.

HEX BOLTS

A307 A



ASTM A307 A

Low carbon steel, general purpose bolt.

No Grade Mark



SAE J429 Grade-2

General purpose bolt. Up to 3/4 of an inch, the minimum strength requirement of a Grade 2 is greater than that of an A307A.



SAE J429 Grade-5

Medium carbon steel, quenched and tempered.



SAE J429 Grade-8

Medium carbon alloy steel. A Grade 8 bolt is significantly stronger than a Grade 5.

HEAVY HEX NUTS

No Grade Mark



ASTM A563 Grade-B

Carbon Steel. For general use in industrial, commercial and residential applications.



ASTM A194 Grade-2H

Medium carbon steel, heat treated, quenched and tempered.



ASTM A563-C

Medium carbon steel, may be heat treated, quenched and tempered.



ASTM A563-DH

Medium carbon steel or alloy, heat treated, quenched and tempered. A194 2H nuts are an acceptable substitute for A563 DH nuts.

HEAVY HEX BOLTS

A307 B



ASTM A307B

Intended for joining piping systems with cast iron flanges. When specified, you should **NOT** substitute this bolt.



ASTM A193 B7

Alloy steel, AISI 4140/4142, heat treated, quenched and tempered. Generally used in high temperature/pressure pipe flange and valve service.



ASTM F3125 A325 Type 1

Structural bolt. Medium carbon, carbon boron, or medium carbon alloy steel.



ASTM F3125 Grade-A490

Structural bolt. Stronger than an A325, they are primarily used for connecting structural steel.