Grade Identification Markings for Nuts

Specification	Material	Nominal Size (Inches)	Proof Load Stress (psi) Plain	Zinc Coated	Min.	Max.	Grade Identification Marking
ASTM A563 - Grade 0	Carbon Steel	1/4 - 1-1/2	69,000*	52,000*	B55	C32	
ASTM A563 - Grade A	Carbon Steel	1/4 - 1-1/2	90,000*	68,000*	B68	C32	
ASTM A563 - Grade A Heavy Hex	Carbon Steel	1/4 - 4	100,000* 90,000*	75,000* 68,000*	B68	C32	
ASTM A563 - Grade C Heavy Hex	Carbon Steel, May Be Quenched & Tempered	1/4 - 4	144,000	144,000	B78	C38	
ASTM A563 - Grade DH Heavy Hex	Carbon Steel, Quenched and Tempered	1/4 - 4	175,000	150,000	C24	C38	DH
ASTM A194 - Grade 2H Heavy Hex	Medium Carbon Steel	1/4 - 1-1/2	175,000	150,000***	C24	C38	2H
		over 1-1/2				C38	
ASTM A194 - Grade 8 Heavy Hex	AISI 304	1/4 - 1-1/2	80,000		B60	B105	8

SAE J995 Grade Indentification for Nuts

Specification	Material	Nominal Size (Inches)	Proof Load Stress (psi)	Min.	Max.	Grade Identification Marking Previous	Revised
SAE J995 - Grade 5	Mediun Carbon Steel, Quenched & Tempered	1/4 - 1	120,000*		C32		
			109,000**				
		over 1 - 1-1/2	105,000*		C32		
			94,000**				
SAE J995 - Grade 8	Medium Carbon Alloy Steel, Quenched & Tempered	1/4 - 5/8	150,000*	C24	C32		
		over 5/8-1		C26	C34		
		over 1 - 1-1/2		C26	C36		

*** UNC and 8 UN**
**** UNF 12 UN and Finer**
***** When a zinc coated A194 2Hnut is supplied, the zinc coating, overtapping, lubrication and rotation capacity testing shall be in accordance with ASTM A563 and the proof stress reduced accordingly. Nuts coated with zinc shall have an asterisk (*) marked after the grade symbol. Nuts coated cadmium shall have a plus sign (+) marked after the grade symbol.**
****** These graded identification markings show the latest revision. Both markings will be acceptable for a transition period.**

ASTM Bolt and ASTM A563 Nut Capatibility (ASTM A194 Compatibility Shown for A325 & A490 Bolts)

Grade of Bolt (A)	Surface Finish (B)	Nominal Size (In.)	ASTM A563 Grade and ANSI Style Nut Recommended (C)	Suitable Substitution (D) Heavy Hex
ASTM A307 Grade A	Plain & Zinc Coated	1/4 to 1-1/2	Grade A Hex Nut	A, C, DH
		over 1-1/2 to 2	Grade A Heavy Hex Nut	C, DH
		over 2 to 4	Grade A Heavy Hex Nut	C, DH
ASTM A307 Grade B	Plain & Zinc Coated	1/4 to 1-1/2	Grade A Heavy Hex Nut	C, DH
		over 1-1/2 to 2	Grade A Heavy Hex Nut	C, DH
		over 2 to 4	Grade A Heavy Hex Nut	C, DH
ASTM A449 Types 1 & 2	Plain	1/4 to 1-1/2	Grade B Hex Nut	C, DH
		over 1-1/2 to 3	Grade A Heavy Hex Nut	C, DH
	Zinc Coated	1/4 to 1-1/2	Grade DH Heavy Hex Nut	
		over 1-1/2 to 3	Grade DH Heavy Hex Nut	
ASTM A325	Plain	1/2 to 1-1/2	Grade C Heavy Hex Nut ASTM A194 2H, Plain	DH
	Zinc Coated	1/2 to 1-1/2	Grade DH Heavy Hex Nut	
ASTM A354 Grade BC	Plain	1/4 to1-1/2	Grade C Heavy Hex Nut	DH
		over 1-1/2 to 4	Grade C Heavy Hex Nut	DH
	Zinc Coated	1/4 to 1-1/2	Grade DH Heavy Hex Nut	
		over 1-1/2 to 4	Grade DH Heavy Hex Nut	
ASTM A354 Grade BD	Plain	1/4 to 1-1/2	Grade DH Heavy Hex Nut	DH
		over 1-1/2 to 3	Grade DH Heavy Hex Nut	
ASTM A490	Plain	1/2 to 1-1/2	Grade DH Heavy Hex Nut ASTM A194 2H, Plain	
ASTM A193 Grade B7			ASTM A194 Grade 2H Heavy Hex Nut	
ASTM A193 Grade B8			ASTM A194 Grade 8	
ASTM A193 Grade B8M			ASTM A194 Grade 8M	

Note: the above chart should not be considered all inclusive for the fasteners listed. The nuts listed are those that are readily available.
(A) "Bolt" includes all externally threaded types of fasteners.
(B) Zinc coated nuts are nuts intended for use with externally threaded fastners which are hot-dip zinc-coated, mechanically zinc-coated or have a plating or coating of sufficient thickness to require overtapping the nut to provide assembly.
(C) "Recommended" denotes a commercially available nut having the most suitable mechanical properties and dimensional configuration, or style, that will make it possible to obtain the desired bolt load.
(D) "Suitable" denotes nuts having mechanical properties that will make it possible to obtain the desired bolt load, but may require consideration of dimensional configuration, style, suitability and availability.