

Grade Identification Markings for Carbon Steel Externally Threaded Fasteners

Grade Identification Marking	Specification	Material	Nominal Size in.	Proof Load Stress ksi	Tensile Strength Min ksi	Hardness Rockwell		See Note
						Min	Max	
	SAE J429 - Grade 1	Low or Medium Carbon Steel	1/4 thru 1 1/2	33	60	B70	B100	
$\left(\bigcirc \right)$	SAE J429 - Grade 2		1/4 thru 3/4 over	55	74	B80	B100	
			over 3/4 thru 1 1/2	33	60	B70	B100	
	ASTM A307 - Grade A		1/4 thru 4	-	60	B69	B100	
No Mark	ASTM A307 - Grade B		1/4 thru 4		60 Min 100 Max	B69	B95	
\land	SAE J429 - Grade 5	Medium Carbon Steel,	1/4 thru 1 over	85	120	C25	C34	
$\kappa \lambda$	ASTM A449 - Type 1	Quenched and Tempered	1 thru 1 1/2	74	105	C19	C30	
	ASTM A449 - Type 1		over 1 1/2 thru 3	55	90	183	235	3
	Ao fin Atto - Type f			55	30	100	200	5
\bigwedge	SAE J429 - Grade 5.1	Low or Medium Carbon Steel, Quenched and Tempered	N0.6 Thru 1/2	85	120	C25	C40	4
\square								
	SAE J429 - Grade 5.2	Low Carbon Martensite Steel,		05	100	C26	C36	-
	ASTM A449 - Type2	Quenched and Tempered	1/4 thru 1	85	120	C25	C34	
A325	ASTM A325 - Type 1	Medium Carbon Steel						5
	, (c) (ii) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	Quenched and Tempered						
	ASTM A325 - Type 2	Low Carbon Martensite	1/2 Thru 1	85	120	C24	C35	
A325		Steel, Quenched and Tempered	over 1 to 1 1/2	74	105	C19	C31	
		Atmospheric Corrosion Resistant						
A325	ASTM A325 - Type 3	Steel, Quenched and Tempered						6
		,						
		Medium Carbon Alloy Steel,	1/4 thru 2 1/2	105	125	C26	C36	
	ASTM A354 - Grade BC	Quenched and Tempered	over 2 1/2 thru 4	95	115	C22	C33	
$ \langle \rangle $	SAE J429 - Grade 8	Medium Carbon Alloy Steel,	1/4 thru 1 1/2	120	150	C33	C39	
	ASTM A354 - Grade BD	Quenched and Tempered	1/4 thru 2 1/2 over	120	150	C33	C39	
			2 1/2 thru 4	105	140	C31	C39	7
		Low Carbon Mortonaita Alley						
F 1	SAE J429 - Grade 8.2	Low Carbon Martensite Alloy Steel, Quenched and Tempered	1/4 thru 1	120	150	C33	C39	
	SAL 3429 - Grade 0.2	Steel, Quenched and Tempered	1/4 แก่น 1	120	130	000	039	
(A490)	ASTM A490 - Type 1	Medium Carbon Alloy Steel,			150 Min			
	, commission and a specific sp	Quenched and Tempered	1/2 Thru 11/2	120	170 Max	C33	C38	
ta and								
A490	ASTM A490 - Type 2	Low Carbon Martensite Steel,	1/2 Thru 1	120	150 Min	C33	C38	
\sim		Quenched and Tempered			170 Max			
A490								
<u> </u>	ASTM A490 - Type 3	Atmospheric Corrosion Resistant			150 Min			
		Steel, Quenched and Tempered	1/2 Thru 1	120	170 Max		C38	6

1. In addition to the indicated grade marking, all grades included in this Table must be marked for manufacturer identification.

2. While hex heads are shown, grade markings apply equally to products with other head configurations.

3. Hardnesses are Brinell Hardness Numbers.

NOTES: 4. Grade 5.1 is a popular grade for sems

5. A325 Type 1 bolts may also be marked with 3 radial lines 1200 apart in addition to the A325 marking.

6. The bolt manufacturer, at his option, may add other markings to indicate the use of atmospheric corrosion resistant steel.

7. A354 Grade BD products, in sizes 11/2 in. and smaller, are identified as shown and, at the manufacturers option, may have the letters BD added. Larger sizes are marked only BD.

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