

Strength-Grade Designations for American and British Standard Fasteners

Table 4 American SAE Standard (AS 2465 is identical for Grades 2, 5, 8 only).

SAE Grade	Head Marking	Diameter	Tensile Strength Ibf/in ² (min.)	"Proof Load" Stress lbf/in²	Rockwell Hardness
1		¹ /4" to 1 ¹ /2"	60,000	33,000	B70-BI00
2		1/4" to 3/4" over 3/4" to 11/2"	74,000 60,000	55,000 33,000	B80-BI00 B70-BI00
4	None (studs only)	¹ /4" to 1 ¹ /2"	115,000	65,000	C22-C32
5 (Note 1)		¹ /4" to 1" Over 1" to 1 ¹ /2"	120,000 105,000	85,000 74,000	C25-C34 C19-C30
5.1 (Note 2)		No.6 to ⁵ /8"	120,000	85,000	C25-C40
5.2 (Note 3)		¹ /4" to 1"	120,000	85,000	C26-C36
7 (Note 4)		¹ /4" to 1 ¹ /2"	133,000	105,000	C28-C34
8 (Note 5)		¹ /4" to 1 ¹ /2"	150,000	120,000	C33-C39
8.1	None (studs only)	¹ /4" to 1 ¹ /2"	150,000	120,000	C32-C38
8.2		¹ /4" to 1"	150,000	120,000	C33-C39

NOTES:

- 1. Medium carbon steel, quenched and tempered.
- Sems (captive washer) assemblies. These are of low or medium carbon steel, quenched and tempered.
- 3. Low carbon boron steel, quenched and tempered.
- Medium carbon alloy steel, quenched and tempered. Thread rolled after heat treatment.
- 5. Medim carbon alloy steel, quenched and tempered.

