



Submittal Specifications
Abstract of SAE J429

Chemical Requirements

Grade	Material	Carbon, %	Phosphorus, %	Sulfur, %	Grade Marking
1	Low or Medium Carbon Steel	0.55 max	0.030 max	0.050 max	None
2	Low or Medium Carbon Steel	0.15-0.55	0.030 max	0.050 max	None
5	Medium Carbon Steel	0.28-0.55	0.030 max	0.050 max	
8	Medium Carbon Alloy Steel	0.28-0.55	0.030 max	0.050 max	

Mechanical Requirements

Grade	Nom. Size Inches	Full Size Proofload, psi	Yield Strength min, psi	Tensile Strength min, psi	Elong, min, %	RA, min, %	Core Hardness, Rockwell	Tempering, Temperature, min
1	1/4 through 1-1/2	33,000	36,000	60,000	18	35	B7 to B100	N/A
2	1/4 through 3/4	55,000	57,000	74,000	18	35	B80 to B100	N/A
	Over 3/4 through 1-1/2	33,000	36,000	60,000	18	35	B70 to B100	
5	1/4 through 1	85,000	92,000	120,000	14	35	C25 to C34	800F
	Over 1 through 1-1/2	74,000	81,000	105,000	14	35	C19 to C35	
8	1/4 through 1-1/2	120,000	130,000	150,000	12	35	C33 to C39	800F

Grade 2 requirements for sizes 1/4" through 3/4" apply only to bolts 6" and shorter, and to studs of all lengths. For bolts longer than 6", Grade 1 requirements shall apply.

For reference only, for complete spec please see SAE J429.