





**MECHANICAL REQUIREMENTS FOR BOLTS, SCREWS,
STUDS, SEMS, AND U-BOLTS**

Grade Designation	Products	Nominal Size Dia, In.	Full-Size Bolts, Screws, Studs, SEMS, Proof Load (Stress), psi	Full Size Bolts, Screws, Studs, SEMS, Tensile Strength (Stress) Min, psi	Machine Test Specimens of Bolts, Screws and Studs Yield Strength (Stress) Min, psi	Machine Test Specimens of Bolts, Screws, and Studs Tensile Strength (Stress) Min, psi	Surface Hardness Rockwell 30N Max	Core Hardness Rockwell Min	Core Hardness Rockwell Max	Grade Identification Marking
1	Bolts, Screws, Studs	1/4 thru 1-1/2	33,000	60,000	36,000	60,000	-	B70	B100	None
2	Bolts, Screws, Studs	1/4 thru 3/4	55,000	74,000	57,000	74,000	-	B80	B100	None
		Over 3/4 thru 1-1/2	33,000	60,000	36,000	60,000	-	B70	B100	
4	Studs	1/4 thru 1-1/2	65,000	115,000	100,000	115,000	-	C22	C32	None
5	Bolts, Screws, Studs	1/4 thru 1	85,000	120,000	92,000	120,000	54.50	C25	C34	
		Over 1 thru 1-1/2	74,000	105,000	81,000	105,000		C19	C30	
5.1	SEMS	No.4 thru 5/8	85,000	120,000	-	-	59.5	C25	C40	
5.2	Bolts, Screws	1/4 thru 1	85,000	120,000	92,000	120,000	56	C26	C36	
8	Bolts, Screws, Studs	1/4 thru 1-1/2	120,000	150,000	130,000	150,000	58.6	C33	C39	
8.1	Studs	1/4 thru 1-1/2	120,000	150,000	130,000	150,000	58.6	C33	C39	None
8.2	Bolts, Screws	1/4 thru 1	120,000	150,000	130,000	150,000	58.6	C33	C39	