

Material Grade: **B7**
 Material Condition(s): **Untreated / Quench and tempered**
 Surface Finish: **As rolled / As forged / Bright turned**

Associated Standard: **ASTM A193/A193M**

Description:

A low alloy Chrome-Molybdenum steel suitable for use in medium - high temperature service. It is typically used for bolts and possesses good strength in quench and tempered condition. By varying of the tempering temperature two strength levels can be achieved depending on strengths required in service (B7 & B7M)

Typical applications: **Studbolts for pressure vessels, valves, flanges and fittings**

1. STEELMAKING

	<u>C</u>	<u>Si</u>	<u>Mn</u>	<u>S</u>	<u>P</u>	<u>Cr</u>	<u>Mo</u>
Min	0.38	0.15	0.75			0.80	0.15
Max	0.48	0.35	1.00	0.040	0.035	1.10	0.25

2. TYPICAL MECHANICAL PROPERTIES

Test type			<u>Tensile and hardness test (at room temperature)</u>					
			Yield (Re)	0.2 % proof	UTS (Rm)	Elong (A)	R of A (Z)	Hardness
Variation	Sample dia	Unit	KSI	KSI	KSI	%	%	HB
B7 Q+T	> 2¼" < 4"	Min		95	115	16	50	
		Max						321
B7M Q+T	< 4"	Min		75	100	18	50	
		Max						235