



PROPERTIES OF HIGH TEMP, HIGH PRESSURE FASTENERS (METRIC)

BOLT SIZE	PITCH	STRESS AREA MM2	BOLT/STUD/SCREW ASTM A193 B7M						NUT ASTM A194 2HM		
			PROOF STRESS N/MM2	PROOF LOAD KN	TENSILE STRESS N/MM2	TOUR-QUE* N-m	HARD-NESS HRC	ELONGA-TION# %	PROOF STRESS N/MM2	PROOF LOAD KN	HARD-NESS HRC
M6	1	20.1	550	11.1	690.0	8.9	-99	18.0	1035	20.8	-22
M8	1.25	36.6	550	20.1	690.0	21.6	-99	18.0	1035	37.9	-22
M10	1.5	58.8	550	32.3	690.0	43.4	-99	18.0	1035	60.9	-22
M12	1.75	84.3	550	46.4	690.0	74.7	-99	18.0	1035	87.3	-22
M14	2.0	115.0	550	63.3	690.0	118.9	-99	18.0	1035	119.0	-22
M16	2.0	157.0	550	86.4	690.0	185.5	-99	18.0	1035	162.5	-22
M18	2.5	192.0	550	105.6	690.0	255.2	-99	18.0	1035	198.7	-22
M20	2.5	245.0	550	134.6	690.0	361.8	-99	18.0	1035	253.6	-22
M22	2.5	303.0	550	166.7	690.0	492.2	-99	18.0	1035	313.6	-22
M24	3.0	353.0	550	194.2	690.0	625.6	-99	18.0	1035	365.4	-22
M27	3.0	459.0	550	252.5	690.0	915.1	-99	18.0	1035	475.1	-22
M30	3.5	561.0	550	308.6	690.0	1,243	-99	18.0	1035	580.6	-22
M33	3.5	694.0	550	381.7	690.0	1,691	-99	18.0	1035	718.3	-22
M36	4.0	817.0	550	449.4	690.0	2,172	-99	18.0	1035	845.6	-22
M39	4.0	976.0	550	536.8	690.0	2,811	-99	18.0	1035	1,010	-22
M42	4.5	1,120.0	550	616.0	690.0	3,473	-99	18.0	1035	1,159	-22
M45	4.5	1,310.0	550	720.5	690.0	4,353	-99	18.0	1035	1,356	-22
M48	5.0	1,470.0	550	808.5	690.0	5,210	-99	18.0	1035	1,521	-22
M52	5.0	1,760.0	550	968.0	690.0	6,785	-99	18.0	1035	1,822	-22
M56	5.5	2,030.0	550	1,117	690.0	8,394	-99	18.0	1035	2,101	-22
M60	5.5	2,360.0	550	1,298	690.0	10,455	-99	18.0	1035	2,443	-22
M64	6.0	2,680.0	550	1,474	690.0	12,665	-99	18.0	1035	2,774	-22
M68	6.0	3,060.0	550	1,683	690.0	15,364	-99	18.0	1035	3,167	-22
M72	6.0	3,460.0	550	1,903	690.0	18,394	-99	18.0	1035	3,581	-22
DIMENSIONS			HEAVY HEX						HEAVY HEX		
MARKINGS			'RS' 'B7M'						'RS' '2HM'		
TEMPERING oC			620						620		
Heating for 24 Hours for the Nut oC									540		
HARDNESS AFTER HEATING									84 HRb		
CARBON			0.37-0.49						0.4-		
MANAGENESE			0.65-1.10						-1.0		
SULPHUR			-0.040						-0.050		
SILICON			0.15-0.35						-0.40		
CHROMIUM			0.75-1.20								
MOLYDENUM			0.15-0.25								
NICKLE											
VANADIUM											
BORON											
PHOSPHOROUS			-0.035						-0.4		
MATERIAL			Chromium-molybdenum Steel						Medium Carbon or Alloy Steel		

NOTES:

Left hand side of '-' is minimum value
 Right hand side of '-' is maximum value
 Eg. 0.5 - 0.7 min. is 0.5 and max is 0.7
 Eg. -0.8 max is 0.8 no minimum value
 Eg. 2.0- min. is 2.0 no maximum value

Elongation in 2 Inch or 50mm

* Torque value based on 75% of proof load and finish as recieved steel