



PROPERTIES OF LOW TEMPERATURE FASTENERS

BOLT SIZE	PITCH	STRESS AREA MM2	BOLT/STUD/SCREW ASTM A320 L7						NUT ASTM A194 GR7		
			PROOF STRESS N/MM2	PROOF LOAD KN	TENSILE STRESS N/MM2	TORQUE* N-m	HARDNESS HRC	ELONGATION# %	PROOF STRESS N/MM2	PROOF LOAD KN	HARDNESS HRC
M6	1	20.1	725	14.6	860.0	11.7	-	16.0	1205	24.2	24-35
M8	1.25	36.6	725	26.5	860.0	28.5	-	16.0	1205	44.1	24-35
M10	1.5	58.8	725	42.6	860.0	57.2	-	16.0	1205	70.9	24-35
M12	1.75	84.3	725	61.1	860.0	98.5	-	16.0	1205	101.6	24-35
M14	2.0	115.0	725	83.4	860.0	156.7	-	16.0	1205	138.6	24-35
M16	2.0	157.0	725	113.8	860.0	244.5	-	16.0	1205	189.2	24-35
M18	2.5	192.0	725	139.2	860.0	336.4	-	16.0	1205	231.4	24-35
M20	2.5	245.0	725	177.6	860.0	476.9	-	16.0	1205	295.2	24-35
M22	2.5	303.0	725	219.7	860.0	648.8	-	16.0	1205	365.1	24-35
M24	3.0	353.0	725	255.9	860.0	824.6	-	16.0	1205	425.4	24-35
M27	3.0	459.0	725	332.8	860.0	1,206	-	16.0	1205	553.1	24-35
M30	3.5	561.0	725	406.7	860.0	1,638	-	16.0	1205	676.0	24-35
M33	3.5	694.0	725	503.2	860.0	2,229	-	16.0	1205	836.3	24-35
M36	4.0	817.0	725	592.3	860.0	2,863	-	16.0	1205	984.5	24-35
M39	4.0	976.0	725	707.6	860.0	3,705	-	16.0	1205	1,176	24-35
M42	4.5	1,120.0	725	812.0	860.0	4,578	-	16.0	1205	1,350	24-35
M45	4.5	1,310.0									
M48	5.0	1,470.0									
M52	5.0	1,760.0									
M56	5.5	2,030.0									
M60	5.5	2,360.0									
M64	6.0	2,680.0									
M68	6.0	3,060.0									
M72	6.0	3,460.0									
DIMENSIONS			HEAVY HEX						HEAVY HEX		
MARKINGS			'L7'						'7'		
TEMPERING oC			593						595		
Heating for 24 Hours for the Nut oC									590		
HARDNESS AFTER HEATING									94 HRB		
CARBON			0.38-0.48						0.37-0.49		
MANAGENESE			0.75-1.0						0.65-1.10		
SULPHUR			-0.04						0.04		
SILICON			0.15-0.35						0.15-0.35		
CHROMIUM			0.80-1.10						0.75-1.20		
MOLYDENUM			0.15-0.25						0.15-0.25		
NICKLE			-								
VANADIUM											
BORON											
PHOSPHOROUS			-0.035						-0.035		
MATERIAL			AISI 4140 TO 4145						AISI 4140 TO 4145H		

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