



# PROPERTIES OF LOW TEMPERATURE FASTENERS

BOLT SIZE	PITCH	STRESS AREA MM2	BOLT/STUD/SCREW ASTM A320 L7M						NUT ASTM A194 7M		
			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	550	11.1	690.0	8.9	-99	30.0	1035	20.8	-22
M8	1.25	36.6	550	20.1	690.0	21.6	-99	30.0	1035	37.9	-22
M10	1.5	58.8	550	32.3	690.0	43.4	-99	30.0	1035	60.9	-22
M12	1.75	84.3	550	46.4	690.0	74.7	-99	30.0	1035	87.3	-22
M14	2.0	115.0	550	63.3	690.0	118.9	-99	30.0	1035	119.0	-22
M16	2.0	157.0	550	86.4	690.0	185.5	-99	30.0	1035	162.5	-22
M18	2.5	192.0	550	105.6	690.0	255.2	-99	30.0	1035	198.7	-22
M20	2.5	245.0	550	134.6	690.0	361.8	-99	30.0	1035	253.6	-22
M22	2.5	303.0	550	166.7	690.0	492.2	-99	30.0	1035	313.6	-22
M24	3.0	353.0	550	194.2	690.0	625.6	-99	30.0	1035	365.4	-22
M27	3.0	459.0	550	252.5	690.0	915.1	-99	30.0	1035	475.1	-22
M30	3.5	561.0	550	308.6	690.0	1,243	-99	30.0	1035	580.6	-22
M33	3.5	694.0	550	381.7	690.0	1,691	-99	30.0	1035	718.3	-22
M36	4.0	817.0	550	449.4	690.0	2,172	-99	30.0	1035	845.6	-22
M39	4.0	976.0	550	536.8	690.0	2,811	-99	30.0	1035	1,010	-22
M42	4.5	1,120.0	550	616.0	690.0	3,473	-99	30.0	1035	1,159	-22
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'						'7M'		
TEMPERING oC			620						620		
Heating for 24 Hours for the Nut oC									590		
HARDNESS AFTER HEATING									84 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