PROPERTIES OF STRUCTURAL BOLT & NUT AS PER A325M

BOLT SIZE	PITCH	STRESS AREA MM2	BOLT/STUD/SCREW ASTM A325M-I						NUT ASTM A563M CL 10*				
			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
									PLAIN	HDG	PLAIN	HDG	
M6	1	20.1											
M8	1.25	36.6											
M10	1.5	58.8											
M12	1.75	84.3	600	50.6	830.0	81.5	25-34	14.0	1245	1165	105	98	24-35
M14	2.0	115.0	600	69.0	830.0	129.7	25-34	14.0	1245	1165	143	134	24-35
M16	2.0	157.0	600	94.2	830.0	202.3	25-34	14.0	1245	1165	195	183	24-35
M18	2.5	192.0	600	115.2	830.0	278.4	25-34	14.0	1245	1165	239	224	24-35
M20	2.5	245.0	600	147.0	830.0	394.7	25-34	14.0	1245	1165	305	285	24-35
M22	2.5	303.0	600	181.8	830.0	536.9	25-34	14.0	1245	1165	377	353	24-35
M24	3.0	353.0	600	211.8	830.0	682.4	25-34	14.0	1245	1165	439	411	24-35
M27	3.0	459.0	600	275.4	830.0	998.3	19-30	14.0	1245	1165	571	535	24-35
M30	3.5	561.0	600	336.6	830.0	1,356	19-30	14.0	1245	1165	698	654	24-35
M33	3.5	694.0	600	416.4	830.0	1,845	19-30	14.0	1245	1165	864	809	24-35
M36	4.0	817.0	600	490.2	830.0	2,369	19-30	14.0	1245	1165	1,017	952	24-35
M39	4.0	976.0											
M42	4.5	1,120.0											
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 (HSFG)	HEAVY HEX (HSFG)
MARKINGS	'A325M' '8S'	'10S'
CARBON	0.28 - 0.55	0.18 -0.58
MANAGENESE	0.57-	0.57-
SULPHUR	-0.045	-0.058
SILICON	0.13-0.37	
CHROMIUM	-3.99	
MOLYDENUM		
NICKLE		
VANADIUM		
BORON		
PHOSPHOROUS	-0.048	-0.048
MATERIAL	Medium Carbon or Alloy 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

* Equivalent to ASTM A194 2H

Elongation in length of 4 times Diameter

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