PROPERTIES OF STRUCTURAL BOLT & NUT AS PER A490

			BOLT/STUD/SCREW ASTM A490-1						NUT ASTM A563M CL 10*				
									PROOF STRESS **N/MM2**		PROOF LOAD **KN**		
BOLT SIZE	**PITCH**	STRESS AREA **MM2**	PROOF STRESS **N/MM2**	PROOF LOAD **KN**	TENSILE STRESS **N/ MM2**	TOUR-QUE* **N-m**	HARD-NESS **HRC**	ELONGA-TION# **%**	PLAIN	HDG	PLAIN	HDG	HARD-NESS **HRC**
M6	1	20.1											
M8	1.25	36.6											
M10	1.5	58.8											
M12	1.75	84.3	830	70.0	1040-1200	112.7	33-39	14.0	1245	1165	105	98	24-35
M14	2.0	115.0	830	95.5	1040-1200	179.4	33-39	14.0	1245	1165	143	134	24-35
M16	2.0	157.0	830	130.3	1040-1200	279.9	33-39	14.0	1245	1165	195	183	24-35
M18	2.5	192.0	830	159.4	1040-1200	385.1	33-39	14.0	1245	1165	239	224	24-35
M20	2.5	245.0	830	203.4	1040-1200	546.0	33-39	14.0	1245	1165	305	285	24-35
M22	2.5	303.0	830	251.5	1040-1200	742.8	33-39	14.0	1245	1165	377	353	24-35
M24	3.0	353.0	830	293.0	1040-1200	944.0	33-39	14.0	1245	1165	439	411	24-35
M27	3.0	459.0	830	381.0	1040-1200	1,381	33-39	14.0	1245	1165	571	535	24-35
M30	3.5	561.0	830	465.6	1040-1200	1,875	33-39	14.0	1245	1165	698	654	24-35
M33	3.5	694.0	830	576.0	1040-1200	2,552	33-39	14.0	1245	1165	864	809	24-35
M36	4.0	817.0	830	678.1	1040-1200	3,277	33-39	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	'RS' 'A490M' '10S'	'RS' '10S'
CARBON	0.28 - 0.5	0.18 -0.58
MANAGENESE	1.65-	0.57-
SULPHUR	-0.045	-0.058
SILICON	0.6-	
CHROMIUM	-3.99	
MOLYDENUM		
NICKLE		
VANADIUM		
BORON		
PHOSPHOROUS	-0.045	-0.048
MATERIAL	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 50mm Length Min
* Torque value based on 75% of proof load and finish as recieved steel