SHABBARI TRADING L.L.C.

PROPERTIES OF HEX BOLT & NUT (UNC / UNF) GRADE 8

NOMINAL DIAMETER	PITCH in TPI			stress area in mm2			BOLT, SCREW & STUD SAE J429 GRADE 8							NUT SAE J995 GRADE 8			
SIZE	UNC	UNF	8UN	UNC	UNF	8UN	Proof Stress N/mm	Proof Load UNC KN	Proof Load UNF KN	Tensile Stress N/mm	Tour-que* N m	Hard-ness HRC	ELONGA-TION# %	Proof Stress UNC N/mm	Proof Load UNC KN	Proof Stress UNF KN	Hardness HRC
1/4	20	28		20.5	23.5		827	17.0	19.4	1034	14.47	33-39	12.0	1034	21.2	24.3	24-32
5/16	18	24		33.8	37.5		827	28.0	31.0	1034	29.81	33-39	12.0	1034	35.0	38.7	24-32
3/8	16	24		50.0	56.7		827	41.3	46.9	1034	52.87	33-39	12.0	1034	51.7	58.6	24-32
7/16	14	20		68.6	76.6		827	56.7	63.3	1034	84.62	33-39	12.0	1034	70.9	79.2	24-32
1/2	13	20		91.5	103	91.5	827	75.7	85.3	1034	129.1	33-39	12.0	1034	94.7	106.7	24-32
9/16	12	18		117	131	117	827	97.1	108.3	1034	186.2	33-39	12.0	1034	121.4	135.4	24-32
5/8	11	18		146	165	146	827	120.6	136.6	1034	257.0	33-39	12.0	1034	150.8	170.7	24-32
3/4	10	16		216	241	216	827	178.5	199.0	1034	456.4	33-39	12.0	1034	223.1	248.8	26-32
7/8	9	14		298	329	298	827	246.4	271.8	1034	735.1	33-39	12.0	1034	308.0	339.9	26-32
1	8	12	8	391	428	391	827	323.2	353.8	1034	1,102	33-39	12.0	1034	404.1	442.3	26-32
1 1/16			8			448	827	-	-	1034	-	33-39	12.0	1034	-	-	26-32
1 1/8	7	12	8	492	552	510	827	407.2	456.6	1034	1,562	33-39	12.0	1034	509.2	570.8	26-32
1 3/16			8			575	827	-	-	1034	-	33-39	12.0	1034	-	-	26-32
1 1/4	7	12	8	625	692	645	827	517.1	572.5	1034	2,204	33-39	12.0	1034	646.5	715.8	26-32
1 5/16			8			718	827	-	-	1034	-	33-39	12.0	1034	-	-	26-32
1 3/8	6	12	8	745	848	796	827	616.2	701.5	1034	2,889	33-39	12.0	1034	770.4	877.0	26-32
1 7/16			8			877	827	-	-	1034	-	33-39	12.0	1034	-	-	26-32
1 1/2	6	12	8	907	1,020	962	827	749.8	843.6	1034	3,835	33-39	12.0	1034	937.4	1,055	26-32
1 9/16			8			1,052											
1 5/8			8			1,145											
1 11/16			8			1,242											
1 3/4	5		8	1,225		1,343											
1 7/8			8			1,557											
2	4 1/2		8	1,612		1,788											
2 1/4	4 1/2		8	2,095		2,295											
2 1/2	4		8	2,580		2,866											
2 3/4			8			3,819											
3			8			4,198											
3 1/4			8			4,959											
3 1/2			8			5,783											
4			8			7,621											

DIMENSION	NORMAL HEX	NORMAL HEX
MARKING	Six Radial Lines	Six Radial Lines
CARBON	0.03-0.48 / 0.35-0.53	-0.55
MANGANESE	1.65-	-0.30
SULPHUR	-0.04	-0.05
SILICON	0.60-	0.15-0.30
CHROMIUM	3.99-	
MOLYBDENUM		
NICKLE		
VANADIUM		
PHOPHORUS		-0.04
MATERIAL	Alloy Steel	Alloy Steel

Notes:

1. 8UN means less than 1" UNC thread and above 1" 8 TPI thread
2. Left hand side of '-' is minium 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 minimam value

Eg. 2.0- min is 2.0 no maximam value

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

Metric Units is followed, if not available it has been converted to metric unit for uniformity