



# PROPERTIES OF A193 B8M TYPE 2

NOMINAL DIAMETER	PITCH in TPI			stress area in mm <sup>2</sup>			BOLT, SCREW & STUD ASTM A193 B8M-2						HEAVY HEX NUT ASTM A194 Gr. 8M			
	SIZE	UNC	UNF	8UN	UNC	UNF	8UN	Yield Stress 8UN N/mm	Yield Load 8UN KN	Tensile Stress N/mm	Torque* N m	Hardness HRC	ELONGATION# %	Proof Stress N/mm	Proof Load 8UN KN	Hardness HRC
1/4	20	28		20.5	23.5											
5/16	18	24		33.8	37.5											
3/8	16	24		50.0	56.7											
7/16	14	20		68.6	76.6											
1/2	13	20		91.5	103	91.5	655	59.9	758	102.2	-35	15.0	552	50.5	60-105	
9/16	12	18		117	131	117	655	76.6	758	147.0	-35	15.0	552	64.6	60-105	
5/8	11	18		146	165	146	655	95.6	758	203.8	-35	15.0	552	80.6	60-105	
3/4	10	16		216	241	216	655	141.5	758	361.8	-35	15.0	552	119.2	60-105	
7/8	9	14		298	329	298	552	164.5	690	490.8	-35	20.0	552	164.5	60-105	
1	8	12	8	391	428	391	552	215.7	690	735.6	-35	20.0	552	215.7	60-105	
1 1/16			8			448	448	200.9	655	727.8	-35	25.0	552	247.5	60-105	
1 1/8	7	12	8	492	552	510	448	228.5	655	876.4	-35	25.0	552	281.5	60-105	
1 3/16			8			575	448	257.8	655	1,044	-35	25.0	552	317.7	60-105	
1 1/4	7	12	8	625	692	645	448	288.9	655	1,232	-35	25.0	552	356.0	60-105	
1 5/16			8			718	345	247.9	620	1,109	-35	30.0	552	396.6	60-105	
1 3/8	6	12	8	745	848	796	345	274.6	620	1,287	-35	30.0	552	439.3	60-105	
1 7/16			8			877	345	302.6	620	1,483	-35	30.0	552	484.2	60-105	
1 1/2	6	12	8	907	1,020	962	345	332.1	620	1,698	-35	30.0	552	531.3	60-105	
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	HEAVY HEX	HEAVY HEX
MARKING	'RS' B8M'	'RS' '8M'
TEMPERING oC		
Heating for 24Hours for the Nut oC		
HARDNESS AFTER HEATING		
CARBON	-0.08	-0.08
MANAGENESE	-2.0	-2.0
SULPHUR	-0.03	-0.030
SILICON	-1.0	-1.0
CHROMIUM	16.0-18.0	16.0-18.0
MOLYBDENUM	2.0-3.0	2.0-3.0
NICKLE	10.0-14.0	10.0-14.0
VANADIUM		
PHOPHORUS		-0.045
MATERIAL	SS-316	SS-316

**Notes:**

- 1. 8UN means less than 1" UNC thread and above 1" 8 TPI thread
- 2. 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 length of 4 times Diameter

\* 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