



# PROPERTIES OF A193 B8M TYPE 1

NOMINAL DIAMETER	PITCH in TPI			stress area in mm <sup>2</sup>			BOLT, SCREW & STUD ASTM A193 B8M-1					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	Tourque* 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	207	18.9	517	32.3	-96		552	50.5	60-105	
9/16	12	18		117	131	117	207	24.2	517	46.5	-96		552	64.6	60-105	
5/8	11	18		146	165	146	207	30.2	517	64.4	-96		552	80.6	60-105	
3/4	10	16		216	241	216	207	44.7	517	114.3	-96		552	119.2	60-105	
7/8	9	14		298	329	298	207	61.7	517	184.1	-96		552	164.5	60-105	
1	8	12	8	391	428	391	207	80.9	517	275.9	-96		552	215.7	60-105	
1 1/16			8			448	207	92.8	517	336.3	-96		552	247.5	60-105	
1 1/8	7	12	8	492	552	510	207	105.6	517	405.0	-96	30.0	552	281.5	60-105	
1 3/16			8			575	207	119.1	517	482.4	-96	30.0	552	317.7	60-105	
1 1/4	7	12	8	625	692	645	207	133.5	517	569.1	-96	30.0	552	356.0	60-105	
1 5/16			8			718	207	148.7	517	665.5	-96	30.0	552	396.6	60-105	
1 3/8	6	12	8	745	848	796	207	164.7	517	772.4	-96	30.0	552	439.3	60-105	
1 7/16			8			877	207	181.6	517	890.0	-96	30.0	552	484.2	60-105	
1 1/2	6	12	8	907	1,020	962	207	199.2	517	1,019	-96	30.0	552	531.3	60-105	
1 9/16			8			1,052	207	217.7	517	1,160	-96	30.0	552	580.6	60-105	
1 5/8			8			1,145	207	237.0	517	1,313	-96	30.0	552	632.0	60-105	
1 11/16			8			1,242	207	257.1	517	1,480	-96	30.0	552	685.7	60-105	
1 3/4	5		8	1,225		1,343	207	278.1	517	1,659	-96	30.0	552	741.5	60-105	
1 7/8			8			1,557	207	322.4	517	2,061	-96	30.0	552	859.7	60-105	
2	4 1/2		8	1,612		1,788	207	370.0	517	2,523	-96	30.0	552	986.7	60-105	
2 1/4	4 1/2		8	2,095		2,295	207	475.1	517	3,645	-96	30.0	552	1,267	60-105	
2 1/2	4		8	2,580		2,866	207	593.2	517	5,057	-96	30.0	552	1,582	60-105	
2 3/4			8			3,819	207	790.5	517	7,413	-96	30.0	552	2,108	60-105	
3			8			4,198	207	868.9	517	8,889	-96	30.0	552	2,317	60-105	
3 1/4			8			4,959	207	1,026	517	11,375	-96	30.0	552	2,737	60-105	
3 1/2			8			5,783	207	1,197	517	14,268	-96	30.0	552	3,192	60-105	
4			8			7,621	207	1,578	517	21,518	-96	30.0	552	4,207	60-105	

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