

ASTM A 194M 1

ALLOY STEEL

NUT MATERIAL FOR HIGH TEMPERATURE SERVICE

ASTM A 194M 1 specification 2 covers a variety of carbon, alloy, and martensitic stainless steel nuts in the size range 1/4 through 4 in. and metric M6 through M100 nominal. It also covers austenitic stainless steel nuts in the size range 1/4 in. and M6 nominal and above. These nuts are intended for high-pressure or high-temperature service, or both. Grade substitutions without the purchaser's permission are not allowed. Austenitic stainless steel may be solution annealed or annealed and strain-hardened. When annealed and strain hardened austenitic stainless steel is ordered in accordance with Supplementary Requirement.

Chemical Properties

C	Si	Mn	P	S
0.15 Min	0.40 Max	1.00 Max	0.040 Max	0.050 Max

Mechanical Properties

Proof Load Using Threaded Mandrel- METRIC (kN)

Hardness

TYPE	M6	M8	M10	M12	M14	M16	BHN	HRB	HRC
HEAVY HEX	18	32.8	51.9	75.5	102.9	140.5	Min	Min	Min
HEX	16.6	30.2	47.9	69.5	94.9	129.5	121	70	-

TYPE	M20	M22	M24	M27	M30	M36
HEAVY HEX	219.3	271.2	315.9	411	502.1	731.2
HEX	202.1	249.9	291.2	378.7	462.8	674

Heat Treatment

Stress Relief Annealed @ 538°C.

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