

## ASTM A 194M 8P

# STAINLESS STEEL

NUT MATERIAL FOR HIGH TEMPERATURE SERVICE

ASTM A 194M 8P is – Specification for carbon and alloy steel nuts for bolts for high-pressure or high-temperature service, or both. Its scope covers a variety of carbon, alloy and martensitic stainless steel nuts in the size range M6 through M100 nominal. It also covers austenitic stainless steel nuts in the size range M6 nominal and above, AISI 305 with restricted carbon. When strain hardening is required with strain hardened, it shall be specified in the order. ASTM A 194M 8P nuts shall be machined from cold drawn bars or shall be cold forged to shape. No subsequent heat treatment shall be performed on the nuts. The melting point of elemental zinc is approximately 415 °C. Therefore, application of zinc coated fasteners should be limited to temperature less than 210°C.

### Chemical Properties

C	Si	Mn	P	S	Cr	Ni
0.08 Max	1.00 Max	2.00 Max	0.045 Max	0.030 Max	17.0-19.0	11.0-13.0

### Mechanical Properties

#### Proof Load Using Threaded Mandrel- METRIC (kN)

#### Hardness

TYPE	M6	M8	M10	M12	M14	M16	BHN	HRB	HRC
HEAVY HEX	11.1	20.1	31.9	46.4	63.3	86.4			
HEX	10.4	18.8	29.9	43.4	59.2	80.9	126-300	60-105	-

TYPE	M20	M22	M24	M27	M30	M36
HEAVY HEX	134.8	166.7	194.2	252.5	308.6	449.4
HEX	126.2	156	181.8	236.4	288.9	420.8

### Heat Treatment

Carbide Solution Treated.

### Equivalent Designation

UNS S30500

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