

## ASTM A 194M 7M

# ALLOY STEEL

NUT MATERIAL FOR HIGH TEMPERATURE SERVICE

ASTM A 194M 7M specification covers alloy steel Type Molybdenum-chromium hexagon nut intended for use with bolts or stud bolts. ASTM A194M 7M where high temperature and/ or high-pressure service is required. It is typically compatible to use with Bolts ASTM A320 Gr.L7M where low temperature is required. Heat-treated and annealed at minimum temperature of 1,100 °F (595 °C).

### Chemical Properties

C	Si	Mn	P	S	Cr	Mo
0.37-0.49	0.15-0.35	0.65-1.10	0.035 Max	0.04 Max	0.75-1.20	0.15-0.25

### Mechanical Properties

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

#### Hardness

TYPE	M6	M8	M10	M12	M14	M16	BHN	HRB	HRC
HEAVY HEX	20.8	37.9	60	87.3	119	162.5		Min	Max
HEX	18.7	34	53.9	78.4	107	146	159-237	-	22

TYPE	M20	M22	M24	M27	M30	M36
HEAVY HEX	253.6	313.6	365.4	475.1	580.6	845.6
HEX	227.8	281.8	328.3	426.9	521.7	759.8

### Heat Treatment

Quenched & Tempered@620°C.

### Equivalent Designation

UNS G41400  
W.Nr. 1.7225

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