



Earnest Machine Product's line of B7 Threaded Rods are manufactured from Alloy Steel to meet the requirements of ASTM A193.

Grade B7 is the strongest grade available for rods in lengths of 3 feet and longer (rods of this length heat treated to the grade 8 strength level of 150,000 psi would warp and not hold their straightness).

Physical Properties:

Tensile Strength	Yield Strength	Elongation	Reduction of Area
125,000 psi min	105,000 psi min	16% min	50% min

Heat Treatment: Quench and Tempered to

Hardness	Minimum Tempering Temperature
Rc 35 max	1100° F

Material: Alloy Steel containing Chromium and Molybdenum (typical steels 4140, 4140H, 4142, 4142H, 4145)

Element	Range	Element	Range
Carbon	0.37 – 0.49	Silicon	0.15 – 0.35
Manganese	0.65 – 1.10	Chromium	0.75 – 1.20
Phosphorus, max	0.035	Molybdenum	0.15 – 0.25
Sulfur, max	0.040		

Earnest Machine Products recommends the use of ASTM A194 Grade 2H Nuts with B7 threaded rod



2H Heavy Hex Nuts

Physical Properties

Proof Load Strength	Hardness
175,000 psi min	Rc 24 to 38

(Samples are tested for hardness after being subjected to a temperature of 1000° F for 24 Hrs)

Material:

Element	Range	Element	Range
Carbon	0.40 min	Sulfur	0.050 max
Manganese	1.00 max	Silicon	0.040 max
Phosphorus	0.040 max		