

MATERIAL GRADE DATA SHEET

# **ASTM A 194M 8MA**



NUT MATERIAL FOR HIGH TEMPERATURE SERVICE

ASTM A 194M 8MA Hexagonal Nut made of stainless steel, Manufactured to use with Bolts or Stud Bolts. ASTM A193 B8MA for rustproof and corrosive resistant. It is manufactured for used in high temperature service and it is compatible to use with ASTM A320 Gr.B8M in low temperature service. Compose of Nickel substance enables of toughness and best for polishing, it is also acid/base corrosive resistant but it non resistant for concentratelike niter. ASTM A 194M 8MA Best for electro-magnet when mix with Nickel. Compose of chromium substance enables of corrosive & erosion resistant. In addition heat-treated of Molybdenum helps to create agglomerate of intensive carbide to avert from crack and prevent from grain expansion. Solution annealed in finished condition

## **Chemical Properties**

| С        | Si       | Mn       | P         | S         | Cr        | Мо        | Ni        |  |
|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|--|
|          |          |          |           |           |           |           |           |  |
| 0.08 Max | 1.00 Max | 2.00 Max | 0.045 Max | 0.030 Max | 16.0-18.0 | 2.00-3.00 | 10.0-14.0 |  |

# **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 | 126-192 | 60-90 | -   |

| 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 in the finished condition.

## **Equivalent Designation**

UNS S31600 W.Nr. 1.4401

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