# Torq Bolt Inc.

FFI

MATERIAL GRADE DATA SHEE

# ASTM A 194M 8C

NUT MATERIAL FOR HIGH TEMPERATURE SERVICE

Hardness

STAINLESS

ASTM A 194M 8C Hexagonal Nut made of stainless steel, Manufactured in accordance with ASTM standard to use with Bolts or Stud Bolts. ASTM A193 B8C for rustproof and corrosive resistant. It is manufactured for used in high temperature service and it is compatible to use with ASTM A320 Gr.B8C in low temperature service. In sum circumstances it may also be used with ASTM A453 Gr.660 in very high consecutive temperature. Compose of Nickel substance enables of toughness and best of polishing, it is also acid/base corrosive resistant but it non resistant for concentratelike niter. ASTM A 194M 8C Best for electro -magnet when mix with Nickel. Compose of chromium substance enables of corrosive & erosion resistant. As for columbium and Tantalum even though it is not the same substance, but could be simultaniously found. Columbium is one substance that used for the manufacture of atomic-reactor steel barrier. Tantalum is mainly used for the manufacture of capacitors & rectifier in electronics industry.

# **Chemical Properties**

| С        | Si       | Mn       | P         | S         | Cr        | Ni       | Cb+Ta    |
|----------|----------|----------|-----------|-----------|-----------|----------|----------|
|          |          |          |           |           |           |          |          |
| 0.08 Max | 1.00 Max | 2.00 Max | 0.045 Max | 0.030 Max | 17.0-19.0 | 9.0-12.0 | 0.80 Min |

## **Mechanical Properties**

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

| 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 S34700 W.Nr. 1.4550

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