

HEAVY HEX BOLTS GRADE A193 B7

SUBMITTAL SPECIFICATIONS
 ABSTRACT OF ASTM A193 / ASTM A194
 GRADE: CHROMIUM MOLYBDENUM (AISI 4140)

CHEMICAL REQUIREMENTS

Chemical analysis shall be performed in accordance with ASTM A751

	CARBON	MANGANESE	PHOPHOROUS MAX	SULFER MAX	SILICON	CHROMIUM	MOLYBDENUM
RANGE	0.37 – 0.49	0.65 – 1.10	0.035	0.040	0.15 – 0.35	0.75 – 1.20	0.15 – 0.25
VARIATION	0.02	0.04	0.005 OVER	0.005 OVER	0.02	0.05	0.02

MECHANICAL REQUIREMENTS

YIELD STRENGTH (KSI)	REDUCTION OF AREA %	TENSILE STRENGTH (KSI)	ELONGATION (%)
105	50	125	16

Heavy Hex Nuts Grade 2H ASTM A194 Washers ASTM F436 Hardened Steel

BOLTS AND NUTS MAY BE SUPPLIED

Plain Zinc Plated Hot Dip Galvanized Cad Plated

LOCATION

Buried Submerged Above Grade Below Grade Other

DIMENSIONAL DATA: All bolts and nuts should be heavy pattern and threaded in accordance with ANSI/ASME B1.1, page A-26, Class 2A fit, sizes 1 inch and smaller in diameter with the coarse-thread series, and the 1 1/8 inch larger in diameter with the 8-pitch thread series. Bolt heads shall be in accordance with the dimensions of ANSI/ASME B18.2.1, page C-1

ADDITIONAL INFORMATION: Additional information can be found in ASTM A193 / A193M, DTD 1998 (alloy steel and stainless bolting materials for high temperature services) and in ASTM A194 / A194M, DTD 1998 (carbon and alloy steel nuts for bolts for high temperature services)