

ASTM F593 BOLT

STAINLESS STEEL

(TYPE 316 GROUP 2)

MECHANICAL PROPERTIES

			FULL-SIZE TESTS			MACHINED SPECIMEN TESTS		
CONDITION	ALLOY MECHANICAL PROPERTY MARKING	NOMINAL DIAMETER IN.	TENSILE STRENGTH KSI	YIELD STRENGTH KSI	ROCKWELL HARDNESS	TENSILE STRENGTH KSI	YIELD STRENGTH KSI	ELONGATION IN 4 D %
AF	F593E	¼ TO 1-1/2 INCL	65-85	20	B85 MAX	60	20	40
A	F593F	¼ TO 1-1/2 INCL	75-100	30	B65 TO 95	70	30	30
CW1	F593G	¼ TO 5/8 INCL	100 TO 150	65	B95 TO C32	95	60	20
CW2	F593H	¾ TO 1-1/2 INCL	85 TO 140	45	B80 TO C32	80	40	25

CHEMICAL PROPERTIES

ELEMENT	CHEMICAL COMPOSITION,% MAX (UNLESS MIN/MAX LIMITS GIVEN)
CARBON	0.08
MANGANESE	2.00
PHOSPHORUS	0.045
SULFUR	0.030
SILICON	1.00
CHROMIUM	16.00-18.00
MOLYBDENUM	2.00-3.00
NICKEL	10.00-14.00

F593 316SS BOLTS ARE INTENDED FOR USE IN CORROSIVE ENVIRONMENTS. ADDED NICKEL AND MOLYBDENUM GIVE THEM SUPERIOR CORROSION RESISTANCE AND INCREASED TENSILE STRENGTH AT HIGH TEMPERATURES. F593 316SS NUTS ARE SUPPLIED IN A HEX HEAD PATTERN PER ASME B18.2.2 STANDARD FOR SQUARE AND HEX NUTS. THE NUT NORMALLY USED WITH A F593 316SS BOLT IS A F594 316SS HEX NUT.

NOTE: PROPERTIES AND APPLICATION PARAMETERS ARE TYPICAL AND ARE PRESENTED IN GOOD FAITH BUT NO WARRANTY IS EXPRESSED OR IMPLIED.