

# SA 325 TYPE 3 ALLOY STEEL

WEATHERING STEEL / CORTEN STEEL

**CLASS A**

HEAT TREATED, 120/105 KSI MINIMUM TENSILE STRENGTH BOLTS

SA 325 covers two types of quenched and tempered steel structural bolts having a minimum tensile strength of 120 ksi for sizes 1.0 in. and less and 105 ksi for sizes 1.0 to 1 1/2 in., inclusive. SA 325 Type 1 is Medium carbon, carbon boron or medium carbon alloy steel where as SA 325 Type 3 is Weathering steel. Weathering steel is atmospheric corrosion resistance and weathering characteristics are comparable to that of steels. The atmospheric corrosion resistance of these steels is substantially better than that of carbon steel or without copper addition. A complete metric companion to specification SA 325 has been developed therefore, no metric equivalents are presented in this specification.

### Chemical Properties

C	Mn	P	S	Si	Cr	Ni	Cu
0.31-0.42	0.86-1.24	0.045 Max	0.055 Max	0.13-0.37	0.42-0.68	0.22-0.48	0.22-0.48

### Hardness

Bolt Size, in	BHN	HRC
1/2 to 1, incl	253-319	25-34
1 1/8 to 1 1/2, incl	223-286	19-30

### Tensile Requirement For Full Size Bolts

	Bolt Size, Threads per inch and Series Designation					
	1/2-13 UNC	5/8-11 UNC	3/4-10 UNC	7/8-9 UNC	1-8 UNC	1 1/8-7 UNC
Tensile Strength, min	17050	27100	40100	55450	72700	80100
Proof Load, Length Measurement Method	12050	19200	28400	39250	51500	56450
Alternative Proof Load, Yield Strength Method, min	13050	20800	30700	42500	55750	61800

1 1/8-8 UNC	1 1/4-7 UNC	1 1/4-8 UN	1 3/8-6 UNC	1 3/8-8 UN	1 1/2-6 UNC	1 1/2-8 UN
82950	101700	105000	121300	129500	147500	156700
58450	71700	74000	85450	91250	104000	110400
64000	78500	81000	93550	99870	113800	120850

### Heat Treatment

### Equivalent Designation

UNS
EN number
EN Name
W.Nr.
SS
AFNOR

**TorqBolt Inc**

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