

ASTM F568 8.8.3

WEATHERING STEEL

BOLTING MATERIAL FOR STRUCTURAL PURPOSE

ASTM F568 defines materials used for manufacturing a broad category of fasteners with a wide variety of materials strengths. All metric fasteners are made using materials that are specified in ASTM F568. Some classes of bolts in the F568 family that are essentially equivalent to some common types of structural bolts are the following: Class 8.8.3 mechanical properties are essentially the same as A325 Type 3, a weathering steel,

Chemical Properties

Alloy	C	Mn Min	P Max	S Max	Si Max	Cr Min	Ni Min	Mo Min	V	Cu Min
8.8.3A	0.31-0.42	0.86-1.24	0.045	0.055	0.13-0.37	0.42-0.68	0.22-0.48	-	-	0.22-0.48
8.8.3B	0.36-0.50	0.67-0.93	0.06-0.125	0.055	0.25-0.55	0.47-0.83	0.47-0.83	0.07	-	0.17-0.43
8.8.3C	0.14-0.26	0.76-1.39	0.040	0.045	0.13-0.37	0.27-0.53	0.22-0.53	-	0.010	0.17-0.53
8.8.3D	0.14-0.26	0.36-1.24	0.045	0.055	0.20-0.55	0.45-1.05	0.47-0.83	0.11	-	0.27-0.53
8.8.3E	0.18-0.27	0.56-1.04	0.045	0.045	0.13-0.37	0.55-0.95	0.27-0.63	-	-	0.27-0.63
8.8.3F	0.19-0.26	0.86-1.24	0.045	0.045	0.13-0.37	0.42-0.68	0.17-0.43	-	-	0.17-0.43

Mechanical Properties

Alloy	Yield strength	Tensile strength	Elongation	Reduction	Hardness
	Mpa	Mpa	%	%	BHN
	min	min	min	min	
8.8.3A	660	830	12	35	23-34
8.8.3B	660	830	12	35	23-34
8.8.3C	660	830	12	35	23-34
8.8.3D	660	830	12	35	23-34
8.8.3E	660	830	12	35	23-34
8.8.3F	660	830	12	35	23-34

Proof Load Values, kN

Nominal Product Diameter & Thread Pitch

	M20 X 2.5	M22 X 2.5	M24 X 3	M27 X 3	M30 X 3.5	M36 X 4
Method 1	147	182	212	275	337	490
Method 2	162	200	233	303	370	539

M42 X 4.5	M48 X 5	M56 X 5.5	M64 X 6	M72 X 6	M80 X 6
672	882	1220	1610	2050	2600
730	970	1340	1790	2280	2860

Heat Treatment

Quenched & Tempered @ 425°C

CUSTOMER ASSISTANCE : customer@TorqBolt.com