

MATERIAL GRADE DATA

ASTM F568 8.8

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

CARBON

SHEET

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 mechanical properties are essentially the same as A449 and A325 Types 1 and 2 (note: the material is similar to A325 but the geometry is different),

Chemical Properties

с	P	S
Max	Max	Max
0.25-0.55	0.048	0.058

Mechanical Properties

Yeild strength	Tensile strength	Elongation	Reduction	Hardness
Mpa	Мра	%	%	BHN
min	min	min	min	
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

1220

1340

1610

1790

2050

2280

2600

2860

Heat Treatment

Quenched & Tempered @ 425°C

672

730

882

970

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