

Bennett Bolt Works, Inc.

Technical Data Sheet: ASTM A588

Jordan, NY
(315)689-3981

This specification covers high-strength, low-alloy structural steel shapes, plates, and bars for welded, riveted, or bolted construction with atmospheric corrosion resistance. Heat analysis shall be performed wherein the low-alloy structural steel materials shall conform to the required chemical composition for carbon, manganese, phosphorous, sulfur, silicon, nickel, chromium, molybdenum, copper, vanadium, and columbium. Steel samples shall also undergo the tensile test and conform to required values of tensile strength, yield point, and elongation.

Mechanical Properties	
Tensile, min, ksi	70
Yield, min, ksi	50
Elongation, min % in 8"	18
Elongation, min % in 2"	21

Chemical Requirements			
Element %	Grade A	Grade B	Grade C
Carbon	0.19 max	0.20 max	0.17 max
Manganese	0.80 – 1.25	0.75 – 1.35	0.50 – 1.20
Phosphorus	0.04 max	0.04 max	0.04 max
Sulfur	0.05 max	0.05 max	0.05 max
Silicon	0.30 – 0.65	0.15 – 0.50	0.25 – 0.50
Nickel	0.40 max	0.50 max	0.40 max
Chromium	0.40 – 0.65	0.40 – 0.70	0.40 – 0.70
Molybdenum	-	-	0.10 max
Copper	0.25 – 0.40	0.20 – 0.40	0.30 – 0.50
Vanadium	0.02 – 0.10	0.01 – 0.10	-
Columbium	-	-	0.005 – 0.05