

ASTM A516/A516M

ASTM A516/A516M Specification for Pressure Vessel Plates, Carbon Steel, for Moderate and Lower Temperature Service.



ASTM A516/A516M specification covers carbon steel plates intended primarily for service in welded pressure vessels where improved notch toughness is important. According to different strength levels, the plates are available in four grades: Grades 55, 60, 65, and 70. The maximum thickness of plates is limited only by the capacity of the composition to meet the specified mechanical property requirements. The steel shall be killed and shall conform to fine austenitic grain size requirements. The mechanical properties such as tensile strength, yield strength, and elongation shall be determined by a tension test for the plates.

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Standard: ASTM A516/A516M
Grade : ASTM A516 Gr 55, 60, 65, 70
Thickness : 8mm -260mm
Width : 1000mm-4000mm
Length : 1000mm-20000mm
MOQ: 1 PC
Product type : Steel plate
Delivery time : Promptly (Stock) or 10-40 days (Production)
Stock : Available
MTC: Available
Delivery condition: As Rolled or Normalized

TABLE 1
CHEMICAL REQUIREMENTS

Elements	Composition, %			
	Grade 55 [Grade 380]	Grade 60 [Grade 415]	Grade 65 [Grade 450]	Grade 70 [Grade 485]
Carbon, max ^A :				
½ In. [12.5 mm] and under	0.18	0.21	0.24	0.27
Over ½ In. to 2 In. [12.5 to 50 mm], Incl	0.20	0.23	0.26	0.28
Over 2 In. to 4 In. [50 to 100 mm], Incl	0.22	0.25	0.28	0.30
Over 4 to 8 In. [100 to 200 mm], Incl	0.24	0.27	0.29	0.31
Over 8 In. [200 mm]	0.26	0.27	0.29	0.31
Manganese:				
½ In. [12.5] and under:				
Heat analysis ^B	0.60-0.90	0.60-0.90	0.85-1.20	0.85-1.20
Product analysis ^B	0.55-0.98	0.55-0.98	0.79-1.30	0.79-1.30
Over ½ In. [12.5]:				
Heat analysis	0.60-1.20	0.85-1.20	0.85-1.20	0.85-1.20
Product analysis	0.55-1.30	0.79-1.30	0.79-1.30	0.79-1.30
Phosphorus, max ^A	0.035	0.035	0.035	0.035
Sulfur, max ^A	0.035	0.035	0.035	0.035
Silicon:				
Heat analysis	0.15-0.40	0.15-0.40	0.15-0.40	0.15-0.40
Product analysis	0.13-0.45	0.13-0.45	0.13-0.45	0.13-0.45

^A Applies to both heat and product analyses.

^B Grade 60 plates ½ In. [12.5 mm] and under In thickness may have 0.85-1.20% manganese on heat analysis, and 0.79-1.30% manganese on product analysis.

TABLE 2
TENSILE REQUIREMENTS

	Grade			
	55 [380]	60 [415]	65 [450]	70 [485]
Tensile strength, ksi [MPa]	55-75 [380-515]	60-80 [415-550]	65-85 [450-585]	70-90 [485-620]
Yield strength, min, ^B ksi [MPa]	30 [205]	32 [220]	35 [240]	38 [260]
Elongation In 8 In. [200 mm], min, %	23 ^A	21 ^A	19 ^A	17 ^A
Elongation In 2 In. [50 mm], min, %	27 ^A	25 ^A	23 ^A	21 ^A

^A See Specification A 20/A 20M.

^B Determined by either the 0.2% offset method or the 0.5% extension-under-load method.

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We are a professional ASME SA516 and ASTM A516 steel stockist and supplier. We can supply different product type and grades of ASME SA516 . If you have any need of ASME SA516 steel please do not hesitate to contact us .

ASME SA516

ASME SA516 Grade 55

ASME SA516 Grade 60

ASME SA516 Grade 65

ASME SA516 Grade 70

ASTM A516 Grade 55

ASTM A516 Grade 60

ASTM A516 Grade 65

ASTM A516 Grade 70