

(Properties minima unless stated)

Tensile Strength ksi (MPa)	Yield Stress ⁴⁾ ksi (MPa)	Elongation %		Thickness t in	
		8 in	2 in		
45/65 (310/450)	24 (165)	27 ¹⁾	30	t ≤ 2	
50/70 (345/485)	27 (185)	25 ¹⁾	28	t ≤ 2	
55/75 (380/515)	30 (205)	23 ¹⁾	27	t ≤ 2	
55/75 (380/515)	30 (205)	23	27	t ≤ 1	
				1 < t ≤ 2	
				2 < t ≤ 4	
				4 < t ≤ 8	
60/80 (415/550)	32 (220)	21	25	t > 8	
				t ≤ 1	
				1 < t ≤ 2	
				2 < t ≤ 4	
65/85 (450/585)	35 (240)	19	23	4 < t ≤ 8	
				t > 8	
				t ≤ 1	
				1 < t ≤ 2	
70/90 (485/620)	38 (260)	17	21	2 < t ≤ 4	
				4 < t ≤ 8	
				t > 8	
				t ≤ 1/2	
55/75 (380/515)	30 (205)	23	27	1/2 < t ≤ 2	
				2 < t ≤ 4	
				4 < t ≤ 8	
				t > 8	
60/80 (415/550)	32 (220)	21	25	t ≤ 1/2	
				1/2 < t ≤ 2	
				2 < t ≤ 4	
				4 < t ≤ 8	
65/85 (450/585)	35 (240)	19	23	t > 8	
				t ≤ 1/2	
				1/2 < t ≤ 2	
				2 < t ≤ 4	
70/90 (485/620)	38 (260)	17	21	4 < t ≤ 8	
				t > 8	
				t ≤ 1/2	
				1/2 < t ≤ 2	
55/75 (380/515)	30 (205)	23	27	2 < t ≤ 4	
				4 < t ≤ 8	
				t > 8	
				t ≤ 1/2	
60/80 (415/550)	32 (220)	21	25	1/2 < t ≤ 2	
				2 < t ≤ 4	
				4 < t ≤ 8	
				t > 8	
65/85 (450/585)	35 (240)	19	23	t ≤ 1/2	
				1/2 < t ≤ 2	
				2 < t ≤ 4	
				4 < t ≤ 8	
70/90 (485/620)	38 (260)	17	21	t > 8	
				t ≤ 1/2	
				1/2 < t ≤ 2	
				2 < t ≤ 4	
55/75 (380/515)	30 (205)	23	27	4 < t ≤ 8	
				t > 8	
				t ≤ 1/2	
				1/2 < t ≤ 2	
60/80 (415/550)	32 (220)	21	25	2 < t ≤ 4	
				4 < t ≤ 8	
				t > 8	
				t ≤ 1/2	
65/85 (450/585)	35 (240)	19	23	1/2 < t ≤ 2	
				2 < t ≤ 4	
				4 < t ≤ 8	
				t > 8	
70/90 (485/620)	38 (260)	17	21	t ≤ 1/2	
				1/2 < t ≤ 2	
				2 < t ≤ 4	
				4 < t ≤ 8	

Notes:

- 1) See standard for details on concessions on certain size ranges.
- 2) Grade 60 plates 1/2 in. (12.5mm) and under in thickness may have 0.85-1.20% manganese on heat analysis.
- 3) Plates over 1 1/2 in thick are normalized.
- 4) For ASTM A285 and A516, yield stress is determined by either the 0.2% offset method or the 0.5% extension-under-load method.
- 5) "HR" - hot rolled, "N" - normalized

Remarks:

Fine grain practice :

i) Plate 1.50 in. (38mm) and under in thickness are normally supplied in the as-rolled condition. The plates may be ordered normalized or stress relieved, or both

ii) Plate over 1.50 in. in thickness shall be normalized

Impact Test

Test Temperature °F (°C)	Thickness in	Absorbed Energy ft-lbf [J]	
		Average for 3 Specimens	Minimum for 1 Specimen
-60 (-51)	t ≤ 1	13 [18]	10 [14]
-50 (-46)	1 < t ≤ 2		
-50 (-46)	2 < t ≤ 3		
-50 (-46)	3 < t ≤ 5		
-60 (-51)	t ≤ 1	13 [18]	10 [14]
-50 (-46)	1 < t ≤ 2		
-50 (-46)	2 < t ≤ 3		
-50 (-46)	3 < t ≤ 5		
-60 (-51)	t ≤ 1	13 [18]	10 [14]
-50 (-46)	1 < t ≤ 2		
-40 (-40)	2 < t ≤ 3		
-25 (-32)	3 < t ≤ 5		
-50 (-46)	t ≤ 1	15 [20]	12 [16]
-40 (-40)	1 < t ≤ 2		
-30 (-35)	2 < t ≤ 3		
-20 (-29)	3 < t ≤ 5		