

### ASTM A36 Carbon Structural Steel

Spec	Applicable Thickness (mm)	Chemical Composition (%)						Mechanical Properties			
		Thickness (mm)	C	Si	Mn	P	S	Yield Point (MPa)	Tensile Strength (MPa)	Elongation (%)	
										GL=200mm	GL=50mm
A36	6-75	6≤t≤20	≤0.25	≤0.40	-	≤0.030	≤0.030	≥250	400-550	≥20	≥23
		20<t≤40	≤0.25	≤0.40	0.8-1.2						
		40<t≤65	≤0.26	0.15 - 0.40	0.8-1.2						
		65<t≤75	≤0.27	0.15 - 0.40	0.85-1.2						

### ASTM A283 Low and Intermediate Tensile Strength Carbon Steel Plates

Spec	Applicable Thickness (mm)	Chemical Composition (%)						Mechanical Properties			
		C	Si		Mn	P	S	Yield Point (MPa)	Tensile Strength (MPa)	Elongation (%)	
			t ≤ 40	t > 40						GL=200mm	GL=50mm
A283-C	6-75	≤0.24	≤0.40	0.15 - 0.40	≤0.90	≤0.030	≤0.030	≥205	380-515	≥22	≥25
A283-D	6-75	≤0.27	≤0.40	0.15 - 0.40	≤0.90	≤0.030	≤0.030	≥230	415-550	≥20	≥23

### ASTM A572 High Strength Low-Alloy Nb-V Structural Steel

Spec	Applicable Thickness (mm)	Chemical Composition (%)						Mechanical Properties				
		Thickness (mm)	C	Si		Mn	P	S	Yield Point (MPa)	Min.Tensile Strength (MPa)	Min.Elongation (%)	
				t ≤ 40	t > 40						GL=200mm	GL=50mm
A572-50	TY1 : 6-75	-	≤0.23	≤0.40	0.15-0.40	≤1.35	≤0.03	≤0.03	≥345	≥450	≥18	≥21
	TY2 : 6-75											
	TY3 : 6-75											
A572-60	10-32	-	≤0.26	≤0.40	-	≤1.35	≤0.03	≤0.03	≥415	≥520	≥16	≥18
A572-65	10-32	t≤13	≤0.26	≤0.40	-	≤1.35	≤0.03	≤0.03	≥450	≥550	≥15	≥18
		13<t≤32	≤0.23	≤0.40	-	≤1.65	≤0.03	≤0.03	≥450	≥550	≥15	≥18

### ASTM A573 Structural Carbon Steel Plate of Improved Toughness

Spec	Applicable Thickness (mm)	Chemical Composition (%)						Mechanical Properties			
		Thickness (mm)	C	Si	Mn	P	S	Yield Point (MPa)	Tensile Strength (MPa)	Elongation (%)	
										GL=200mm	GL=50mm
A573-70	6-40	t≤13	≤0.27	0.15-0.40	0.85-1.20	≤0.030	≤0.030	≥290	480-620	≥18	≥21
		13<t≤40	≤0.28								

### ASTM A709 Structural Steel for Bridge

Spec	Applicable Thickness (mm)	Chemical Composition (%)						Mechanical Properties			
		Thickness (mm)	C	Si	Mn	P	S	Yield Point (MPa)	Tensile Strength (MPa)	Elongation (%)	
										GL=200mm	GL=50mm
A709-36	6-75	t≤20	≤0.25	≤0.40	-	≤0.03	≤0.030	≥250	400-550	≥20	≥23
		20<t≤40	≤0.25	≤0.40	0.8-1.2						
		40<t≤65	≤0.26	0.15 - 0.40	0.8-1.2						
		65<t≤75	≤0.27	0.15 - 0.40	0.85-1.2						
A709-50	TY1 : 6-75	6≤t≤40	≤0.23	≤0.40	≤1.35	≤0.03	≤0.03	≥345	≥450	≥18	≥21
	TY3 : 6-75	40<t≤75	≤0.23	0.15 - 0.40	≤1.35	≤0.03	≤0.03	≥345	≥450	≥18	≥21