

ASTM A53 Grade A & B Steel Pipe  
Chemical Composition and Mechanical Properties



Chemical Composition									
Grade	Max, %								
	Carbon	Manganese	Phosphorus	Sulfur	Copper	Nickel	Chromium	Molybdenum	Vanadium
Type S (seamless pipe)									
Grade A	0.25	0.95	0.05	0.045	0.40	0.40	0.40	0.15	0.08
Grade B	0.30	1.20	0.05	0.045	0.40	0.40	0.40	0.15	0.08
Type E (electric-resistance-welded)									
Grade A	0.25	0.95	0.05	0.045	0.40	0.40	0.40	0.15	0.08
Grade B	0.30	1.20	0.05	0.045	0.40	0.40	0.40	0.15	0.08
Type F (furnace-welded pipe)									
Grade A	0.30	1.20	0.05	0.045	0.40	0.40	0.40	0.15	0.08

Mechanical Properties		
Strength	Grade A	Grade B
Tensile strength, min, psi [MPa]	48 000 [330]	60 000 [415]
Yield strength, min, psi [MPa]	30 000 [205]	35 000 [240]
Elongation in 2 in. or 50 mm	e = 625 000 [1940] A <sup>0.2</sup> /U <sup>0.9</sup> or Table X4.2 and X4.2	