

API 5L Grade X52 Pipe Chemical Composition and Mechanical Properties

Chemical Composition				
Steel grade (Steel name)	Mass fraction, based upon heat and product analyses			
	%			
	C	Mn	P	S
	max	max	max	max
PSL 1 pipe with $t \leq 25.0$ mm (0.984 in)				
Seamless pipe				
X52	0.28	1.40	0.030	0.030
Welded pipe				
X52	0.26	1.40	0.030	0.030
PSL 2 pipe with $t \leq 25.0$ mm (0.984 in)				
Seamless pipe				
X52Q	0.18	1.50	0.025	0.015
Welded pipe				
X52M	0.22	1.40	0.025	0.015

Mechanical Properties					
Pipe grade	Pipe body of seamless and welded pipes				Weld seam of EW, LW, SAW and COW pipes
	Yield strength		Tensile strength		Tensile strength
	MPa (psi)		MPa (psi)		MPa (psi), min
PSL 1 pipe					
X52	minimum		minimum		460 (66 700)
	360 (52 200)		460 (66 700)		
PSL 2 pipe					
X52N	minimum	maximum	minimum	maximum	
X52Q	360 (52 200)	530 (76 900)	460 (66 700)	760 (110 200)	