

API 5L Grade X42 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				
X42	0.28	1.30	0.030	0.030
Welded pipe				
X42	0.26	1.30	0.030	0.030
PSL 2 pipe with $t \leq 25.0$ mm (0.984 in)				
Seamless pipe				
X42R	0.24	1.20	0.025	0.015
X42N	0.24	1.20	0.025	0.015
X42Q	0.18	1.40	0.025	0.015
Welded pipe				
X42M	0.22	1.30	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
API 5L X42 PSL 1 pipe					415 (60 200)
X42	minimum		minimum		
	290 (42 100)		415 (60 200)		
API 5L X42 PSL 2 pipe					
X42R	minimum	maximum	minimum	maximum	
X42N	290 (42 100)	495 (71 800)	415 (60 200)	655 (95 000)	