

MECHANICAL PROPERTIES

Standard	Delivery status	Level	Grade	Yield Strength Rt0,5, ksi (MPa) minimum		Tensile Strength Rm, PSI (MPa) minimum		Ratio Rt05 / Rm
				minim	maxim	minim	maxim	
API 5L	Laminare or Laminare normalizanta	PSL1	L210 or A	30500(210)		48600(335)		
			L245 or r B	35500(245)		60200(415)		
			L290 or X42	42100(290)		60200(415)		
			L320 or X46	46400(320)		63100(435)		
			L360 or X52	52200(360)		66700(460)		
			L390 or X56	56600(390)		71100(490)		
			L415 or X60	60200(415)		75400(520)		
			L450 or X65	65300(450)		77600(535)		
	Normalizare	PSL2	L245N or BN	35500(245)	65300(450)	60200(415)	95000(655)	0.93
			L290N or X42N	42100(290)	71800(495)	60200(415)	95000(655)	0.93
			L320N or X46N	46400(320)	76100(525)	63100(435)	95000(655)	0.93
			L360N or X52N	52200(360)	76900(530)	66700(460)	110200(760)	0.93
			L390N or X56N	56600(390)	79000(545)	71100(490)	110200(760)	0.93
			L415N or X60N	60200(415)	81900(565)	75400(520)	110200(760)	0.93
	Calire si Revenire	PSL2	L245Q or BQ	35500(245)	65300(450)	60200(415)	95000(655)	0.93
			L290Q or X42Q	42100(290)	71800(495)	60200(415)	95000(655)	0.93
			L320Q or X46Q	46400(320)	76100(525)	63100(435)	95000(655)	0.93
			L360Q or X52Q	52200(360)	76900(530)	66700(460)	110200(760)	0.93
			L390Q or X56Q	56600(390)	79000(545)	71100(490)	110200(760)	0.93
			L415Q or X60Q	60200(415)	81900(565)	75400(520)	110200(760)	0.93
			L450Q or X65Q	65300(450)	87000(600)	77600(535)	110200(760)	0.93
	Annex H Normalizare	PSL2	L245NS or BNS	35500(245)	65300(450)	60200(415)	95000(655)	0.93
			L290NS or X42NS	42100(290)	71800(495)	60200(415)	95000(655)	0.93
			L320NS or X46NS	46400(320)	76100(525)	63100(435)	95000(655)	0.93
			L360NS or X52NS	52200(360)	76900(530)	66700(460)	110200(760)	0.93
	Annex H Calire si Revenire	PSL2	L245QS or BQS	35500(245)	65300(450)	60200(415)	95000(655)	0.93
			L290QS or X42QS	42100(290)	71800(495)	60200(415)	95000(655)	0.93
			L320QS or X46QS	46400(320)	76100(525)	63100(435)	95000(655)	0.93
			L360QS or X52QS	52200(360)	76900(530)	66700(460)	110200(760)	0.93
			L390QS or X56QS	56600(390)	79000(545)	71100(490)	110200(760)	0.93
			L415QS or X60QS	60200(415)	81900(565)	75400(520)	110200(760)	0.93
			L450QS or X65QS	65300(450)	87000(600)	77600(535)	110200(760)	0.93

Standard	Level	Grade	Yield Strength (ksi)		Tensile Strength (ksi)	Total elongation under Load %	Hardness max.		Specified Wall Thickness (In.)	Allowable Hardness Variation
			minim	maxim	minim		HRC	HB W		HRC
API 5CT	PSL1	H40	40	80	60	0.5				
		R95	95	110	105	0.5				
		C110	110	120	115	0.7	30	286	≤0.500 0.501 to 0.749 0.750 to 0.999 ≥1.000	3.0 4.0 5.0 6.0
		T95(1)	95	110	105	0.5	25.4	255	≤0.500 0.501 to 0.749 0.750 to 0.999 ≥1.000	3.0 4.0 5.0 6.0
	PSL2	J55	55	80	75	0.5				
		K55	55	80	95	0.5				
		L80(1)	80	95	95	0.5	23.0	241		
		N80(1)	80	110	100	0.5				
		N80(Q)	80	110	100	0.5				
		P110	110	140	125	0.6				
		Q125	125	150	135	0.65			≤0.500 0.501 to 0.749 ≥0.750	3.0 4.0 5.0