



Tensile requirements

STRENGTH	GRADE A			GRADE B		
	psi	Kg/cm2	MPa or N/mm2	psi	Kg/cm2	MPa or N/mm2
TENSILE STRENGTH MINIMUM.	48000	3374	331	60000	4218	414
YIELD STRENGTH MINIMUM	30000	2109	207	35000	2461	241
CROSS-SECTORIAL AREA OF THE TEST SPECIMEN , in 2	ELONGATION IN 2 in, MIN. % .					
>0.75	36.0			29.5		
0.70	35.5			29.0		
0.60	34.5			28.5		
0.50	33.5			27.0		
0.40	32.0			26.0		
0.30	30.0			24.5		
0.20	27.5			22.5		

Chemical requirements

COMPOSITION	GRADE A	GRADE B
	MAX.%	MAX.%
CARBON	0.25	0.3
MANGANESE	0.95	1.2
PHOSPHORUS	0.05	0.05
SULFUR	0.045	0.045
LIMITS ON UNSPECIFIED ELEMENTS.	GRADE A	GRADE B
	MAX.%	MAX.%
COPER	0.40	0.40
NICKEL	0.40	0.40
CHROMIUM	0.40	0.40
MOLYBDENUM	0.15	0.15
VANADIUM	0.08	0.08
NOTE: THE COMBINATION OF THESE FIVE ELEMENTS SHALL NOT EXCEED 1%		

Dimensions, weights and test pressures

NOMINAL DIAMETER	EXTERNAL DIAMETER		THICKNESS WALL			WEIGHT			TEST PRESSURE			
	pulg.	pulg. Mm.	pulg.	Mm.	sch	ib/pie	kg/m	kg/ft	GRADE	A	GRADE	B
1/4	0.540	13.7	0.088	2.24	40 (STD)	0.42	0.36	0.11	700	49	700	49
			0.119	3.02	80(XS)	0.54	0.47	0.14	850	60	850	60
3/8	0.675	17.1	0.091	2.31	40 (STD)	0.57	0.62	0.19	700	49	700	49
			0.147	3.20	80(XS)	0.74	0.79	0.24	850	60	850	60
1/2	0.840	21.3	0.109	2.77	40 (STD)	0.85	1.27	0.39	700	49	700	49
			0.147	3.73	80(XS)	1.09	1.62	0.49	850	60	850	60
3/4	1.050	26.7	0.113	2.87	40 (STD)	1.13	1.69	0.51	700	49	700	49
			0.154	3.91	80(XS)	1.48	2.20	0.67	850	60	850	60
1	1.315	33.4	0.133	3.56	40 (STD)	1.68	2.50	0.76	700	49	700	49
			0.179	4.55	80(XS)	2.18	3.24	0.99	850	60	850	60
1 1/4	1.660	42.2	0.140	3.68	40 (STD)	2.28	3.39	1.03	1000	70	1100	77
			0.191	4.85	80(XS)	3.02	4.47	1.36	1500	105	1600	112
1 1/2	1.900	48.3	0.145	3.68	40 (STD)	2.73	4.05	1.23	1000	70	1100	77
			0.200	5.08	80(XS)	3.66	5.41	1.65	1500	105	1600	112
2	2.375	60.3	0.154	3.91	40 (STD)	3.68	5.44	1.66	2300	162	2500	176
			0.128	5.54	80(XS)	5.07	7.48	2.28	2500	176	2500	176
2 1/2	2.875	73.0	0.203	5.16	40 (STD)	5.82	8.63	2.63	2500	176	2500	176
			0.276	7.01	80(XS)	7.73	11.41	3.18	2500	176	2500	176
3	3.500	88.9	0.216	5.49	40 (STD)	7.62	11.29	3.44	2200	155	2500	176
			0.300	7.62	80(XS)	0.33	15.27	4.66	2500	176	2500	176
3 1/2	4.000	101.6	0.226	5.74	40 (STD)	9.20	13.57	4.14	2000	141	2400	169
			0.318	8.08	80(XS)	2.63	18.63	5.68	2800	197	2800	167
4	4.500	114.3	0.237	6.02	40 (STD)	0.89	16.08	4.90	1900	164	2200	155
			0.337	8.56	80(XS)	15.17	22.32	6.80	2700	197	2800	197
5	5.563	141.3	0.258	6.55	40 (STD)	14.81	21.77	6.63	1700	120	1900	134
			0.375	9.53	80(XS)	21.09	30.97	9.44	2400	169	2800	197
6	6.625	168.3	0.280	7.11	40 (STD)	19.18	28.26	8.61	1500	105	1800	127
			0.432	10.97	80(XS)	28.89	42.56	12.97	2300	162	2700	190
8	8.625	219.1	0.277	7.04	30	25.55	36.82	11.22	1200	84	1300	91
			0.322	8.18	40 (STD)	29.35	42.55	12.97	1300	91	1600	112
10	10.750	273.0	0.500	12.70	80(XS)	43.90	64.64	19.70	2100	148	2400	169
			0.365	9.27	40 (STD)	41.85	60.29	18.38	1200	74	1400	98
12	12.750	323.8	0.500	12.70	80(XS)	55.82	81.52	24.85	1700	120	2000	141
			0.375	9.53	40 (STD)	51.15	73.86	22.51	1100	77	1200	84
			0.500	12.70	80(XS)	66.71	97.43	29.7	1400	98	1600	112