

TUBI PER PETROLCHIMICA



Industrie Metalli Cardinale S.p.a.

DIAMETRO							IDENTIFICAZIONE		
NOMINALE	ESTERNO						SPESSORE	PESO	CORR. NORME API
pollici	pollici	mm	pollici	mm	lb/ft	Kg/m			
20	20.000	508,0	.750	19,5	154.19	229,67	5L 5LX		
			.812	20,62	166.40	247,85	5L 5LX		60
			1.031	26,19	208.87	311,11			80
			1.125	28,58	226.78	337,79			
			1.281	32,54	256.10	381,46			100
			1.500	38,10	296.37	441,06			120
			1.750	44,45	341.10	507,63			140
			1.969	50,01	379.14	564,24			160
			22	22.000	558,8	.250	6,35	58.07	86,50
.281	7,14	65.18				97,09	5L 5LX		
.312	7,92	72.27				107,65	5L 5LX		
.344	8,74	79.56				118,50	5L 5LX		
.375	9,52	86.61				129,01	5LX	STD	20
.406	10,31	93.63				139,46	5L 5LX		
.438	11,13	100.86				150,23	5L 5LX		
.469	11,91	107.85				160,64	5LX		
.500	12,70	114.81				171,01	5L 5LX	XS	30
.562	14,27	128.67				191,65	5L 5LX		
.625	15,88	142.68				212,52	5L 5LX		
.688	17,48	156.60				233,26	5L 5LX		
.750	19,05	170.21				253,53	5L 5LX		
.812	20,68	183.75				273,70	5L 5LX		
.875	22,22	197.41				294,04			60
1.125	28,58	250.81				373,58			80
1.250	31,75	277.01				412,61			
1.375	34,92	302.88				451,14			100
1.625	41,28	353.61				526,24			120
1.875	47,62	403.01				599,76			140
2.125	53,98	451.07				671,28			160
24	24.000	609,6	.250	6,35	63.41	94,45	5L 5LX		10
			.281	7,14	71.18	106,02	5L 5LX		
			.312	7,92	78.93	117,57	5L 5LX		
			.344	8,74	86.91	129,45	5L 5LX		
			.375	9,52	94.62	140,94	5L 5LX	STD	20
			.406	10,31	102.31	152,39	5LX		
			.438	11,31	110.22	164,17	5L 5LX		
			.469	11,91	117.86	175,55	5LX		
			.500	12,70	125.49	186,92	5L 5LX	XS	30
			.562	14,27	140.68	209,54	5L 5LX		
			.625	15,88	156.03	232,41	5L 5LX		
			.688	17,48	171.29	255,14	5L 5LX		40
			.750	19,05	186.23	277,39	5L 5LX		
			.812	20,62	201.09	299,52	5L 5LX		
			.938	23,83	231.03	344,12	5L 5LX		
			.969	24,61	238.35	355,02			60
			1.062	26,97	260.17	387,52			
			1.219	30,96	296.58	441,76			80
			1.531	38,89	367.39	547,23			100
			1.812	46,02	429.50	639,18			120
			2.062	52,37	483.24	719,16			140
2.344	59,54	542.09	806,74			160			

Tubi senza saldatura e saldati secondo le norme ANSI B 36.10 - API 5 L e 5LX

Materiale:

- API 5 L: Gradi A - B
- API 5 LX: Gradi X 42 - X 46 - X 52 - X 56 - X 60 - X 65 - X 70
- ASTM A 53: Gradi A - B
- ASTM A 106: Gradi A - B - C
- ASTM A 333: Gradi 1° - 3° - 6°
- ASTM A 335: Gradi P1 - P2 - P5 - P7 - P9 - P11 - P12 - P21 - P22

Caratteristiche Meccaniche e Chimiche

NORMA	ESECUZ.	GRADO	COMPOSIZIONE CHIMICA - %					CARATT. MECCANICHE		
			C	Mn	P	S	Si ≥	R MIN. N/mm ²	R MIN. N/mm ²	A MIN. %
API 5 L	S/S	A	0,22	0,90	0,04	0,05		330	207	15
		B	0,27	1,15	0,04	0,05		414	241	12,5
	SALD	A	0,21	0,90	0,04	0,05		330	207	15
		B	0,26	1,15	0,04	0,05		414	241	12,5
API 5 LX	S/S	X42	0,29	1,25	0,04	0,05		414	289	19
		X46	0,31	1,35	0,04	0,05		435	317	18
		X52	0,31	1,35	0,04	0,05		455	359	17,5
		X56	0,26	1,35	0,04	0,05		490	385	16
		X60	0,26	1,35	0,04	0,05		517	414	15,5
	SALD	X42	0,28	1,25	0,04	0,05		414	289	19
		X46	0,30	1,35	0,04	0,05		435	317	18
		X52	0,30	1,35	0,04	0,05		455	359	17,5
		X56	0,26	1,35	0,04	0,05		490	385	16
		X60	0,26	1,35	0,04	0,05		517	414	15,5
		X65	0,26	1,40	0,04	0,05		531	448	15
		X70	0,23	1,60	0,04	0,05		565	483	14,5
ASTMA 53	S/S	A	0,25	0,95	0,05	0,06		330	207	15
		B	0,30	1,20	0,05	0,06		414	241	12,5
ASTMA 106	S/S	A	0,25	0,27÷0,93	0,048	0,058	0,1	335	209	35
		B	0,30	0,29÷1,06	0,048	0,058	0,1	418	243	30
		C	0,35	0,29÷1,06	0,048	0,058	0,1	488	279	30

TUBI PER PETROLCHIMICA



DIAMETRO			SPESSORE				PESO		IDENTIFICAZIONE		
NOMINALE	ESTERNO								CORR. NORME API	STANDARD X-STRONG XX-STRONG	NUMERO DI SCHEDA
pollici	pollici	mm	pollici	mm	lb/ft	Kg/m					
3/8	0.675	17,1	.091	2,31	.57	0,85	5L	STD	40		
			.126	3,20	.74	1,10	5L	XS	80		
1/2	0.840	21,3	.109	2,77	.85	1,27	5L	STD	40		
			.147	3,73	1.09	1,62	5L	XS	80		
			.188	4,76	1.31	1,95			160		
			.294	7,47	1.71	2,55	5L	XXS			
3/4	1.050	26,7	.113	2,87	1.13	1,68	5L	STD	40		
			.154	3,91	1.47	2,19	5L	XS	80		
			.219	5,56	1.94	2,89			160		
			.308	7,82	2.44	3,63	5L	XXS			
1	1.315	33,4	.133	3,38	1.68	2,50	5L	STD	40		
			.179	4,55	2.17	3,23	5L	XS	80		
			.250	6,35	2.84	4,23			160		
			.358	9,09	3.66	5,45	5L	XXS			
1¼	1.660	42,2	.140	3,56	2.27	3,38	5L	STD	40		
			.191	4,85	3.00	4,47	5L	XS	80		
			.250	6,35	3.76	5,60			160		
			.382	9,70	5.21	7,76	5L	XXS			
1½	1.900	48,3	.145	3,68	2.72	4,05	5L	STD	40		
			.200	5,08	3.63	5,41	5L	XS	80		
			.281	7,14	4.86	7,23			160		
			.400	10,16	6.41	9,55	5L	XXS			
2	2.375	60,3	.109	2,77	2.64	3,93	5L 5LX				
			.125	3,18	3.00	4,47	5L 5LX				
			.141	3,58	3.36	5,00	5L 5LX				
			.154	3,91	3.65	5,44	5L 5LX	STD	40		
			.172	4,37	4.05	6,03	5LX				
			.188	4,78	4.39	6,54	5LX				
			.218	5,54	5.02	7,48	5L 5LX	XS	80		
			.250	6,35	5.67	8,45	5LX				
			.281	7,14	6.28	9,35	5LX				
			.344	8,74	7.46	11,11			160		
2½	2.875	73	.436	11,07	9.03	13,45	5L 5LX	XXS			
			.109	2,77	3.22	4,80	5L 5LX				
			.125	3,18	3.67	5,46	5L 5LX				
			.141	3,58	4.12	6,14	5L 5LX				
			.156	3,96	4.53	6,75	5LX				
			.172	4,37	4.97	7,40	5LX				
			.188	4,78	5.40	8,04	5LX				
			.203	5,16	5.79	8,68	5L 5LX	STD	40		
			.216	5,49	6.13	9,13	5LX				
			.250	6,35	7.01	10,44	5LX				
			.276	7,01	7.66	11,41	5L 5LX	XS	80		
			.375	9,52	10.01	14,91			160		
			.552	14,02	13.69	20,41	5L 5LX	XXS			

TUBI PER PETROLCHIMICA



DIAMETRO							IDENTIFICAZIONE		
NOMINALE	ESTERNO						CORR. NORME API	STANDARD X-STRONG XX-STRONG	NUMERO DI SCHEDULA
pollici	pollici	mm	pollici	mm	lb/ft	Kg/m			
3	3.500	88,9	.125	3,18	4.51	6,72	5L 5LX		
			.141	3,58	5.06	7,54	5L 5LX		
			.156	3,96	5.57	8,30	5L 5LX		
			.172	4,37	6.11	9,10	5LX		
			.188	4,78	6.65	9,91	5L 5LX		
			.216	5,49	7.58	11,29	5L 5LX	STD	40
			.250	6,35	8.68	12,93	5L 5LX		
			.281	7,14	9.66	14,39	5L 5LX		
			.300	7,62	10.25	15,27	5L 5LX	XS	80
			.438	11,13	14.32	21,33			160
		.600	15,24	18.58	27,67	5L 5LX	XXS		
3½	4.000	101,6	.125	3,18	5.17	7,70	5LX		
			.141	3,58	5.81	8,65	5LX		
			.156	3,96	6.40	9,53	5L 5LX		
			.172	4,37	7.03	10,47	5LX		
			.188	4,78	7.65	11,39	5L 5LX		
			.226	5,74	9.11	13,57	5L 5LX	STD	40
			.250	6,35	10.01	14,91	5L 5LX		
			.281	7,14	11.16	16,62	5L 5LX		
			.318	8,08	12.50	18,63	5L 5LX	XS	80
					.125	3,18	5.84	8,70	5L 5LX
4	4.500	114,3	.141	5,58	6.56	9,77	5L 5LX		
			.156	3,96	7.24	10,78	5L 5LX		
			.172	4,37	7.95	11,84	5L 5LX		
			.188	4,78	8.66	12,90	5L 5LX		
			.203	5,16	9.32	13,88	5L 5LX		
			.219	5,56	10.01	14,91	5L 5LX		
			.237	6,02	10.79	16,07	5L 5LX	STD	40
			.250	6,35	11.35	16,91	5L 5LX		
			.281	7,14	12.66	18,86	5L 5LX		
			.312	7,92	13.96	20,79	5L 5LX		
		.337	8,56	14.98	22,31	5L 5LX	XS	80	
		.438	11,13	19.00	28,30	5L 5LX		120	
		.531	13,49	22.51	33,53	5L 5LX		160	
		.674	17,12	27.54	41,02	5L 5LX	XXS		
5	5.563	141,3	.156	3,96	9.01	13,42	5L		
			.188	4,78	10.79	16,07	5L		
			.219	5,56	12.50	18,62	5L		
			.258	6,55	14.62	21,78	5L	STD	40
			.281	7,14	15.85	23,61	5L		
			.312	7,92	17.50	26,07	5L		
			.344	8,74	19.17	28,55	5L		
			.375	9,58	20.78	30,95	5L	XS	80
			.500	12,70	27.04	40,28	5L		120
			.625	15,88	32.96	49,09	5L		160
		.750	19,05	38.55	57,42	5L	XXS		
6	6.625	168,3	.156	3,96	10.78	16,06	5L 5LX		
			.172	4,37	11.85	17,65	5L 5LX		
			.188	4,78	12.92	19,24	5L 5LX		
			.203	5,16	13.92	20,73	5L 5LX		

TUBI PER PETROLCHIMICA



DIAMETRO							IDENTIFICAZIONE		
NOMINALE	ESTERNO						CORR. NORME API	STANDARD X-STRONG XX-STRONG	NUMERO DI SCHEDA
pollici	pollici	mm	pollici	mm	lb/ft	Kg/m			
6	6.625	168,3	.219	5,56	14.98	22,31	5L 5LX		
			.250	6,35	17.02	25,35	5L 5LX		
			.280	7,11	18.97	28,26	5L 5LX	STD	40
			.312	7,92	21.04	31,34	5L 5LX		
			.344	8,74	23.08	34,38	5L 5LX		
			.375	9,52	25.03	37,28	5L 5LX		
			.432	10,97	28.57	42,56	5L 5LX	XS	80
			.500	12,70	32.71	48,72	5L 5LX		
			.562	14,27	36.39	54,20	5L 5LX		120
			.625	15,88	40.05	59,65	5L 5LX		
			.719	18,26	45.35	67,55	5L 5LX		160
			.864	21,95	53.16	79,18	5L	XXS	
8	8.625	219,1	.188	4,78	16.94	25,23	5L 5LX		
			.203	5,16	18.26	27,20	5LX		
			.219	5,56	19.66	29,28	5L 5LX		
			.250	6,35	22.36	33,31	5L 5LX		20
			.277	7,04	24.70	36,79	5L 5LX		30
			.312	7,92	27.70	41,26	5L 5LX		
			.322	8,18	28.55	42,53	5L 5LX	STD	40
			.344	8,74	30.42	45,31	5L 5LX		
			.375	9,52	33.04	49,21	5L 5LX		
			.406	10,31	35.64	53,09			60
			.438	11,13	38.30	57,05	5L 5LX		
			.500	12,70	43.39	64,63	5L 5LX	XS	80
			.562	14,27	48.40	72,09	5L 5LX		
			.594	15,09	50.95	75,89			100
			.625	15,88	53.40	79,54	5L 5LX		
			.719	18,26	60.71	90,43	5L 5LX		120
			.812	20,62	67.76	100,93			140
			.875	22,22	72.42	107,87	5L	XXS	
			.906	23,01	74.71	111,18			160
10	10.750	273,0	.188	4,78	21.15	31,59	5L 5LX		
			.203	5,16	22.87	34,06	5L 5LX		
			.219	5,56	24.63	36,69	5L 5LX		
			.250	6,35	28.04	41,77	5L 5LX		20
			.279	7,09	31.20	46,47	5L 5LX		
			.307	7,80	34.24	51,00	5L 5LX		30
			.344	8,74	38.23	56,94	5L 5LX		
			.365	9,27	40.48	60,29	5L 5LX	STD	40
			.438	11,13	48.24	71,85	5L 5LX		
			.500	12,70	54.74	81,54	5L 5LX	XS	60
			.562	14,27	61.15	91,08	5L 5LX		
			.594	15,09	64.43	92,97			80
			.625	15,88	67.58	100,66	5L 5LX		
			.719	18,26	77.03	114,74	5L 5LX		100
			.812	20,62	86.18	128,37	5L		
			.844	21,44	89.27	132,85			120
			1.000	25,40	104.13	154,97		XXS	140
			1.125	28,58	115.65	172,11			160

TUBI PER PETROLCHIMICA



DIAMETRO							IDENTIFICAZIONE		
NOMINALE	ESTERNO						SPESSORE	PESO	CORR. NORME API
pollici	pollici	mm	pollici	mm	lb/ft	Kg/m			
12	12.750	323,8	.203	5,16	27.22	40,51	5LX		
			.219	5,56	29.28	43,66	5L 5LX		
			.250	6,35	33.38	49,72	5L 5LX		20
			.281	7,14	37.42	55,74	5L 5LX		
			.312	7,92	41.45	61,74	5L 5LX		
			.330	8,38	43.77	65,20	5L 5LX		30
			.344	8,74	45.58	67,89	5L 5LX		
			.375	9,52	49.56	73,82	5L 5LX	STD	
			.406	10,31	53.52	79,72	5LX		40
			.438	11,13	57.59	85,78	5L 5LX		
			.500	12,70	65.42	97,44	5L 5LX	XS	
			.562	14,27	73.15	108,96	5L 5LX		60
			.625	15,88	80.93	120,55	5L 5LX		
			.688	17,48	88.63	132,01	5L 5LX		80
			.750	19,05	96.12	143,17	5L 5LX		
			.844	21,44	107.29	159,67			100
			1.000	25,40	125.49	186,75		XXS	120
			1.125	28,58	139.68	207,87			140
			1.310	33,32	160.33	238,60			160
14	14.000	355,6	.210	5,33	30.93	46,07	5LX		
			.219	5,56	32.20	48,01	5LX		
			.250	6,35	36.71	54,68	5L 5LX		10
			.281	7,14	41.17	61,32	5L 5LX		
			.312	7,92	45.61	67,94	5L 5LX		20
			.344	8,74	50.17	74,73	5L 5LX		
			.375	9,52	54.57	81,28	5L 5LX	STD	30
			.406	10,31	58.94	87,79	5LX		
			.438	11,13	63.44	94,49	5L 5LX		
			.469	11,91	67.78	100,96	5LX		
			.500	12,70	72.09	107,38	5L 5LX	XS	
			.562	14,27	80.66	120,14	5L 5LX		
			.594	15,09	85.05	126,68			60
			.625	15,88	89.28	132,98	5L 5LX		
			.688	17,48	97.81	145,69	5L 5LX		
			.750	19,05	106.13	158,08	5L 5LX		80
			.812	20,62	114.37	170,35	5L		
			.938	23,83	130.85	194,90			100
			1.094	27,79	150.76	224,36			120
			1.250	31,75	170.22	253,32			140
			1.406	35,71	189.15	281,49			160
			2.000	50,80	256.32	381,46			
			2.125	53,98	269.51	401,08			
			2.200	55,88	277.26	412,62			
			2.500	63,50	307.05	456,95			
16	16.000	406,4	.219	5,56	36.87	54,98	5L 5LX		
			.250	6,35	42.05	62,63	5L 5LX		10
			.281	7,14	47.17	70,26	5L 5LX		
			.312	7,92	52.27	77,86	5L 5LX		20

TUBI PER PETROLCHIMICA



DIAMETRO							IDENTIFICAZIONE		
NOMINALE	ESTERNO						CORR. NORME API	STANDARD X - STRONG XX - STRONG	NUMERO DI SCHEDULA
pollici	pollici	mm	pollici	mm	lb/ft	Kg/m			
16	16.000	406,4	.344	8,74	57.52	85,68	5L 5LX	STD	30
			.375	9,52	62.58	93,21	5L 5LX		
			.406	10,31	67.62	100,72	5LX		
			.438	11,13	72.80	108,44	5L 5LX	XS	40
			.469	11,91	77.99	115,87	5LX		
			.500	12,70	82.77	123,29	5L 5LX		
			.562	14,27	92.66	138,02	5L 5LX		
			.625	15,88	102.63	152,87	5L 5LX		
			.656	16,66	107.50	160,12			60
			.688	17,48	112.51	167,58	5L 5LX		
			.750	19,05	122.15	181,94	5L 5LX		
			.812	20,62	131.71	196,18	5L		
			.844	21,44	136.61	203,48			80
			1.031	26,19	164.82	245,50			100
			1.219	30,96	192.40	286,33			120
			1.438	36,53	223.57	332,72			140
			1.594	40,49	245.22	364,94			160
18	18.000	457,2	.250	6,35	47.39	70,59	5L 5LX	STD	10
			.281	7,14	53.18	79,21	5L 5LX		
			.312	7,92	58.94	87,79	5L 5LX		
			.344	8,74	64.87	96,62	5L 5LX	XS	20
			.375	9,52	70.59	105,14	5L 5LX		
			.406	10,31	76.29	113,63	5LX		
			.438	11,13	82.15	122,36	5L 5LX		
			.469	11,91	87.81	130,79	5LX		
			.500	12,70	93.45	139,19	5L 5LX		
			.562	14,27	104.67	155,91	5L 5LX		40
			.625	15,88	115.98	172,75	5L 5LX		
			.688	17,48	127.21	189,48	5L 5LX		
			.750	19,05	138.17	205,80	5L 5LX		60
			.812	20,62	149.06	222,02	5L 5LX		80
			.938	23,83	170.92	254,59			100
			1.156	29,36	207.96	309,76			120
			1.375	34,92	244.14	363,33			140
			1.562	39,67	274.30	408,21			160
			1.781	45,24	308.55	459,18			
20	20.000	508,0	.250	6,35	52.73	78,54	5L 5LX	STD	10
			.281	7,14	59.18	88,15	5L 5LX		
			.312	7,92	65.60	97,71	5L 5LX		
			.344	8,74	72.21	107,56	5L 5LX	XS	20
			.375	9,52	78.60	117,07	5L 5LX		
			.406	10,31	84.96	126,55	5LX		
			.438	11,13	91.51	136,30	5L 5LX		
			.469	11,91	97.83	145,72	5LX		
			.500	12,70	104.13	155,10	5L 5LX		30
			.562	14,27	116.67	173,78	5L 5LX		
			.594	15,09	123.11	183,37			40
			.625	15,88	129.33	192,64	5L 5LX		
			.688	17,48	141.90	211,36	5L 5LX		