



## **Fluid Transport Pipes**

**Black**

**Galvanized**

**Painted**

**Coated**

We transform steel.  
And steel transforms you.







**Innovation and technology with quality  
and efficacy for all markets**

- One of the largest Brazilian steel processors
- 826 thousand tonnes of manufacturing capacity
- 3 industrial plants with 125 thousand sqm in total
- +20 distribution centers in the country

Consolidated as one of the largest Brazilian steel processors, Tuper follows the evolution of the market with broad and modern product lines.

In more than its 50 years of history, the company achieves

high quality standards, taking part in important projects for the development Brazil.

Through its modern industrial park and high production capacity, Tuper complies with the strictest national and international standards, always focusing on the customer.

Besides its operations in the Civil Construction supplies, Tuper also operates in the industry, oil and gas, agribusiness, exhaust system and catalyst system (for the replacement market) and OEM automotive markets.

**Civil Construction**



**Industry**



**Oil and Gas**



**Agribusiness**



**Automotive**



**Distribution**







# PRODUCT PORTFOLIO

## Structural and Industrial Tubes



Carbon-steel tubes with longitudinal welding. ODs of 15.87 up to 339.70 mm. Round, square and rectangular.

## Pipes



Black, galvanized and painted carbon steel pipes. NBR 5580 and NBR 5590.

## Galvanized Pipes



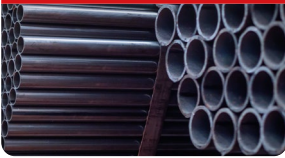
Hot dip galvanized coating with hot air blow finish.

## Galvanized Conduits



Galvanized rigid conduits.

## Tubes For Scaffolds



According to NR18 specifications.

## Pipes for Boilers, Condensers and Heat Exchangers



ASTM A178 and ASTM A214.

## Drawn Pipes



High precision drawn pipes.

## Line Pipe API 5L



5 9/16" to 12 3/4" carbon steel pipes used in oil, minerals, gas and fuel transport.

## Casing API 5CT



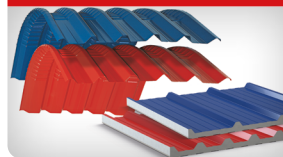
5 1/2" to 13 3/8" carbon steel casing used in oil and gas well casing.

## Tubular Piles with Quick Connection



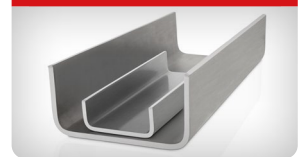
ASTM A252 Grade 3.

## Steel Metallic Roofs



Traditional, decorative, thermoacoustic and special panels.

## Structural Profiles



Profiles and bent parts.

## Ribbed Mixed Slabs



System consisting of metallic joists and EPS.

## Scaffolds



Multidirectional and facade.

## Skelps



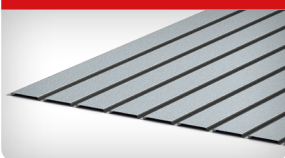
Longitudinal cutting of carbon steel skelps/coils.

## Metallic Props



Produced in carbon steel; adjustable, reusable, and environmentally friendly.

## Wainscot



Wainscot with zinc or Galvalume® coating.

## Aftermarket Exhaust Systems



Exhaust systems, catalysts and automotive tips.

## Exhaust Systems for Assemblers



Application in light and heavy vehicles, agricultural machinery and construction machinery.

## Automotive Parts and Components



Special tubes and components for various applications, such as: suspension axles, shock absorbers, jackets and steering columns, among others.

# NBR 5580 AND 5590 PIPES

Tuper pipes are manufactured in carbon steel, welded in compliance with the ABNT NBR 5580 and ABNT NBR 5590 standards.

They are supplied to efficiently meet the different needs of the market for the conduction of non-corrosive **fluids, water, gas, compressed air, oil and steam**. They comply with INMETRO's compulsory certification, in accordance with current legal provisions, and guarantee safety for life and property.

The ends of transport pipes can have the following characteristics:

- **GROOVED ENDS:** grooved tubes are produced with lamination grooved ends (roll grooved) for use in conduction lines with rigid or flexible cold connections, providing agility, ease and versatility in installation and maintenance.
- **SMOOTH ENDS/FACED:** straight cut and no burrs.
- **BEVELED ENDS:** angle cutting with edge machining.
- **THREADED ENDS:** BSP or NPT thread cut, according to the pipe standard. The threads are protected with anti-corrosion oil and a plastic cap.

## FINISHES

- **BLACK:** black carbon-steel pipes.
- **GALVANIZED:** hot-dip galvanized pipes (fired) with subsequent blow-firing to ensure internal and external layer uniformity.
- **PAINTED:** layer of powder coating (electrostatic), polyester, epoxy or hybrid paint. With the purpose of protection and identification, the tubes are painted according to the norms that regulate the application of colors in the pipes. The surface preparation of the tubes is carried out using abrasive blasting or chemical cleaning and, after the application of the coating, inspections of thickness, adhesion and visual finish are carried out. The colors\* most used in the market are:
  - **Red:** fire combat networks.
  - **Yellow:** gas networks.
  - **Blue:** compressed air networks.
  - **Green:** drinkable water transport networks.

*\*Other colors according to customer's application needs.*



## STANDARDS AND DIMENSIONS

**NBR 5580 (light, medium and heavy classes)  
1/2" to 6"**

**NBR 5590 (SCH 5 to 80, Grades A and B)  
1/2" to 12"**





PAINTED TUBE

GROOVED



# DIMENSIONS

NBR 5590/2015

Nominal Diameter		Outer Diameter (mm)	Wall Thickness (mm)	Schedule	Theoretical Mass of the Tube			
DN	NPS (inch)				Black		Galvanized	
					kg/pp	Pipe/Bundle	kg/pp	Pipe/Bundle
15	1/2	21,30	2,11	10	6,000	135	6,389	79
			2,41	30	6,720	135	7,128	79
			2,77	40	7,620	135	7,979	79
20	3/4	26,70	2,11	10	7,680	124	8,187	70
			2,41	30	8,640	124	9,166	61
			2,87	40	10,140	124	10,614	61
25	1	33,40	3,91	80	13,200	124	13,658	44
			2,77	10	12,540	61	13,189	44
			2,90	30	13,080	61	13,720	44
32	1.1/4	42,20	3,38	40	15,000	61	15,636	37
			4,55	80	19,440	61	20,022	24
			2,77	10	16,140	44	16,979	37
40	1.1/2	48,30	2,97	30	17,220	44	18,053	37
			3,56	40	20,340	44	21,155	24
			4,85	80	26,820	44	27,578	19
50	2	60,30	2,77	10	18,660	37	19,606	24
			3,18	30	21,180	37	22,167	24
			3,68	40	24,300	37	25,222	24
65	2.1/2	73,00	5,08	80	32,460	37	33,384	19
			2,11	...	18,180	29	19,375	24
			2,77	10	23,580	29	24,773	24
80	3	88,90	3,18	30	26,880	29	28,061	24
			3,91	40	32,640	29	33,794	19
			5,54	80	44,880	29	46,024	10
90	3.1/2	101,60	2,11	5	22,140	19	23,603	24
			2,77	...	28,800	19	30,241	24
			3,05	10	31,560	19	33,019	19
100	4	114,30	3,18	...	32,880	19	34,301	19
			3,96	...	40,440	19	41,886	10
			4,78	30	48,240	19	49,666	10
80	3	88,90	5,16	40	51,780	19	53,204	10
			2,11	5	27,120	19	28,897	19
			2,77	...	35,280	19	37,088	19
90	3.1/2	101,60	3,05	10	38,760	19	40,525	19
			3,18	...	40,320	19	42,112	19
			3,96	...	49,740	19	51,532	10
100	4	114,30	4,78	...	59,520	19	61,241	10
			5,49	40	67,740	19	69,487	7
			6,35	...	77,580	19	79,276	7
90	3.1/2	101,60	2,11	5	31,080	13	33,125	19
			2,77	...	40,500	13	42,557	19
			3,05	10	44,460	13	46,519	10
100	4	114,30	3,18	...	46,320	13	48,352	10
			3,96	...	57,180	13	59,238	10
			4,78	...	68,460	13	70,488	10
90	3.1/2	101,60	5,74	40	81,420	13	83,406	7
			6,35	...	89,52	13	91,472	7
			2,11	5	35,04	13	37,353	19
100	4	114,30	2,77	...	45,72	13	48,026	19
			3,05	10	50,22	13	52,515	10
			3,18	...	52,26	13	54,591	10
90	3.1/2	101,60	3,96	...	64,68	13	66,943	10
			4,78	...	77,46	13	79,734	7
			5,56	...	89,46	13	91,716	7
100	4	114,30	6,02	40	96,42	13	98,698	7
			6,35	...	101,4	13	103,668	7

DN: Nominal Diameter  
NPS: Nominal pipe size





Nominal Diameter		Outer Diameter (mm)	Wall Thickness (mm)	Schedule	Theoretical Mass of the Tube			
DN	NPS (inch)				Black		Galvanized	
		kg/pp	Pipe/Bundle	kg/pp	Pipe/Bundle			
125	5	141,3	3,96	...	80,460	19	83,323	10
			4,78	...	96,540	19	99,390	10
			5,56	...	111,660	19	114,489	10
			6,55	40	130,620	19	133,393	10
			7,14	...	141,720	13	144,522	10
			7,92	...	156,300	13	159,076	10
			8,74	...	171,420	13	174,182	10
150	6	168,3	9,52	80	185,640	13	188,366	10
			3,96	...	96,300	10	99,704	10
			4,78	...	115,620	10	119,047	10
			5,56	...	133,860	10	137,261	10
			6,35	...	152,160	10	155,527	10
			7,11	40	169,560	10	172,924	10
			7,92	...	187,920	10	191,277	10
			8,74	...	206,340	10	209,659	10
200	8	219,1	9,52	...	223,680	10	226,960	10
			10,97	80	255,360	7	258,643	7
			3,76	10	119,820	7	124,272	7
			3,96	...	126,060	7	130,524	7
			4,78	...	151,560	7	156,031	7
			5,16	...	163,320	7	167,783	7
			5,56	...	175,680	7	180,109	7
			6,35	20	199,860	7	204,312	7
			7,04	30	217,860	7	225,300	7
			7,92	...	247,440	7	251,864	7
			8,18	40	255,300	7	259,668	7
			8,74	...	272,040	7	276,410	7
			9,52	...	295,200	7	299,574	7
250	10	273	10,31	60	318,480	7	322,851	7
			11,13	...	342,480	7	346,817	7
			12,70	80	387,840	5	392,148	5
			4,19	10	166,680	7	172,234	7
			4,78	...	189,720	7	195,271	7
			5,16	...	204,480	7	210,055	7
			5,56	...	220,020	7	225,570	7
			6,35	20	250,500	7	256,074	7
			7,09	...	278,940	7	284,480	7
			7,80	30	306,060	7	311,582	7
300	12	323,8	8,74	...	341,760	7	347,233	7
			9,27	40	361,740	5	367,219	5
			11,13	...	431,220	5	436,702	5
			12,70	60	489,120	5	494,554	5
			5,56	...	261,780	1	268,418	1
			6,35	20	298,260	1	304,859	1
			7,14	...	334,500	1	341,117	1
			7,92	...	370,140	1	376,734	1
8,38	30	391,080	1	397,655	1			
8,74	...	407,400	1	413,984	1			
9,52	...	442,680	1	449,231	1			
10,31	40	478,200	1	484,748	1			
11,13	...	514,920	1	521,418	1			
12,70	...	584,520	1	591,072	1			

For weight calculations purposes, a part with 6,000 mm in length was considered. Minimum coating mass = 600 g/m<sup>2</sup>.  
Mass calculation for plain end pipes.

DN: Nominal Diameter  
NPS: Nominal pipe size



## CHEMICAL COMPOSITION / MECHANICAL PROPERTIES NBR 5590

GRADES	Chemical Composition									Mechanical Properties of Traction	
	C	*Mn	P	S	**Cu	**Ni	**Cr	**Mo	**V	LE [MPa]	LR [MPa]
	% max.	% max.	% max.	% max.	% max.	% max.	% max.	% max.	% max.	min.	min.
A	0,25	0,95	0,05	0,045	0,40	0,40	0,40	0,15	0,08	205	330
B	0,30	1,20								240	415

\* For each 0.01% reduction below the specified maximum carbon a 0.06% increase of manganese above the specified maximum is allowed up to a maximum of 1.35% for Gr. A and 1.65% for Gr. B  
 \*\* The sum of these chemical elements cannot exceed 1.00%.

$$A = \frac{1942,57 S^{0,2}}{LR^{0,9}}$$

The Min Elongation must be calculated according to the formula:  
 A = Min Elongation (%)  
 S = mm<sup>2</sup>  
 LR = min. resistance limit. (MPa)

## NBR 5580/2015

Diameter			Light Class					Medium Class				Heavy Class					
Nominal		External	Wall Thickness (mm)	Black		Galvanized		Wall Thickness (mm)	Black		Galvanized		Wall Thickness (mm)	Black		Galvanized	
DN	inch	mm		kg/pp	Pipe/Bundle	kg/pp	Pipe/Bundle		kg/pp	Pipe/Bundle	kg/pp	Pipe/Bundle		kg/pp	Pipe/Bundle	kg/pp	Pipe/Bundle
15	1/2	21,30	2,25	6,342	156	6,636	51	2,65	7,313	156	7,601	51	-	-	-	-	-
20	3/4	26,90	2,25	8,207	113	8,588	44	2,65	9,509	113	9,884	44	3,00	10,609	113	10,978	44
25	1	33,70	2,65	12,175	70	12,655	24	3,35	15,044	70	15,513	24	3,75	16,619	70	17,082	24
32	1.1/4	42,40	2,65	15,587	51	16,201	19	3,35	19,357	51	19,961	19	3,75	21,446	51	22,043	19
40	1.1/2	48,30	3,00	20,109	44	20,809	19	3,35	22,282	44	22,977	19	3,75	24,720	44	25,409	19
50	2	60,30	3,00	25,436	29	26,322	10	3,75	31,379	29	32,253	10	4,50	37,155	29	38,017	10
65	2.1/2	76,10	3,35	36,062	24	37,186	10	3,75	40,146	24	41,264	10	4,50	47,676	24	48,783	7
80	3	88,90	3,35	42,407	19	43,729	7	4,00	50,250	19	51,562	7	4,50	56,199	19	57,504	7
90	3.1/2	101,60	3,75	54,295	19	55,807	7	4,25	61,220	19	62,725	7	5,00	71,469	19	72,962	7
100	4	114,30	3,75	61,342	13	63,051	7	4,50	73,111	13	74,808	7	5,60	90,072	13	91,752	7
125	5	139,7	-	-	-	-	-	4,75	94,860	10	96,967	10	5,60	111,120	10	113,227	10
150	6	165,1	-	-	-	-	-	5,00	118,440	10	120,930	10	5,60	132,180	10	134,670	10

For weight calculations purposes, a part with 6,000 mm in length was considered. Minimum coating mass = 400 g/m<sup>2</sup>.  
 Mass calculation for plain end pipes.





# LINE PIPE API 5L

Carbon steel line pipe from 5 3/16" to 12 3/4", employed to transport oil, gas, minerals and fuel.

## STANDARDS

**API 5L Grades:**  
B, X42, X46, X52,  
X56, X60, X65 and X70

## SPECIFICATION LEVEL

PSL-1 and PSL-2



Grades:  
Reference values according to ASME B36 10 meters.  
Tubes are supplied in lengths from 6 to 14 meters.

### DIMENSIONS ATTENDED

Diameter				Wall Thickness			Linear Mass				
Nominal		External		inch	mm	Schedule	kg/m				
NPS (inch)	DN	inch	mm								
5	125	5,563 (5 3/16)	141,10	0,156	3,96	-	13,41				
				0,188	4,78	-	16,09				
				0,219	5,56	-	18,61				
				0,258	6,55	40	21,77				
				0,281	7,14	-	23,62				
				0,312	7,92	-	26,05				
				0,344	8,74	-	28,57				
				0,375	9,53	80	30,97				
6	150	6,625 (6 5/8)	168,30	0,156	3,96	-	16,05				
				0,165	4,19	-	16,96				
				0,172	4,37	-	17,67				
				0,188	4,78	-	19,27				
				0,203	5,16	-	20,76				
				0,219	5,56	-	22,31				
				0,250	6,35	-	25,36				
				0,280	7,11	40	28,26				
				0,312	7,92	-	31,32				
				0,344	8,74	-	34,39				
				0,375	9,53	-	37,31				
				0,432	10,97	80	42,56				
8	200	8,625 (8 5/8)	219,10	0,500	12,7	-	48,73				
				0,156	3,96	-	21,01				
				0,188	4,78	-	25,26				
				0,203	5,16	-	27,22				
				0,219	5,56	-	29,28				
				0,250	6,35	20	33,31				
				0,277	7,04	30	36,81				
				0,312	7,92	-	41,24				
				0,322	8,18	40	42,55				
				0,344	8,74	-	45,34				
				0,375	9,53	-	49,25				
				0,406	10,31	60	53,08				
				0,438	11,13	-	57,08				
				0,500	12,7	80	64,64				
10	250	10,75 (10 3/4)	273,10	0,165	4,19	10	27,79				
				0,188	4,78	-	31,63				
				0,203	5,16	-	34,09				
				0,219	5,56	-	36,68				
				0,250	6,35	20	41,77				
				0,279	7,09	-	46,51				
				0,307	7,8	30	51,03				
				0,344	8,74	-	56,98				
				0,365	9,27	40	60,31				
				0,438	11,13	-	71,90				
				0,500	12,7	60	81,55				
				12	300	12,75 (12 3/4)	323,80	0,203	5,16	-	40,55
								0,219	5,56	-	43,63
								0,250	6,35	20	49,71
0,281	7,14	-	55,76								
0,312	7,92	-	61,69								
0,330	8,38	30	65,18								
0,344	8,74	-	67,90								
0,375	9,53	-	73,86								
0,406	10,31	40	79,70								
0,438	11,13	-	85,82								
0,500	12,7	-	97,43								

Mass calculation for plain end pipes.

DN: Nominal Diameter  
NPS: Nominal pipe size

## CHEMICAL COMPOSITION / MECHANICAL PROPERTIES API SPEC 5L

GRADES	CHEMICAL COMPOSITION FOR TUBES PSL 1 (% Mass Fraction)								MECHANICAL PROPERTIES	
	C	Mn	P		S	V	Nb	Ti	LE [MPa]	LR [MPa]
	max.	max.	min.	max.	max.	max.	max.	max.	min.	min.
L245/B	0,26	1,20	-	0,030	0,030	Nb + V ≤ 0.06 Nb + V + Ti ≤ 0.15	Nb + V ≤ 0.06 Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	245	415
L290/X42	0,26	1,30	-	0,030	0,030	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	290	415
L320/X46	0,26	1,40	-	0,030	0,030	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	320	435
L360/X52	0,26	1,40	-	0,030	0,030	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	360	460
L390/X56	0,26	1,40	-	0,030	0,030	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	390	490
L415/X60	0,26	1,40	-	0,030	0,030	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	415	520
L450/X65	0,26	1,45	-	0,030	0,030	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	450	535
L485/X70	0,26	1,65	-	0,030	0,030	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	485	570

GRADES	CHEMICAL COMPOSITION FOR TUBES PSL 2 (% Mass Fraction)								MECHANICAL PROPERTIES			
	C	Si	Mn	P	S	V	Nb	Ti	LE [MPa]		LR [MPa]	
	max.	max.	max.	max.	max.	max.	max.	max.	min.	max.	min.	max.
L245M/BM	0,22	0,45	1,20	0,025	0,015	0,050	0,050	0,040	245	450	415	655
L290M/X42M	0,22	0,45	1,30	0,025	0,015	0,050	0,050	0,040	290	495	415	655
L320M/X46M	0,22	0,45	1,30	0,025	0,015	0,050	0,050	0,040	320	525	435	655
L360M/X52M	0,22	0,45	1,40	0,025	0,015	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	360	530	460	760
L390M/X56M	0,22	0,45	1,40	0,025	0,015	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	390	545	490	760
L415M/X60M	0,12	0,45	1,60	0,025	0,015	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	415	565	520	760
L450M/X65M	0,12	0,45	1,60	0,025	0,015	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	450	600	535	760
L485M/X70M	0,12	0,45	1,70	0,025	0,015	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	Nb + V + Ti ≤ 0.15	485	635	570	760

Note 1: For PSL 2 tubes, other chemical elements may be present, provided the following percentages are respected:  
 L245M/BM to L390M/X56M: Cu ≤ 0.50 %; Ni ≤ 0.30 %; Cr ≤ 0.30 % and Mo ≤ 0.15%  
 L415M/X60M to L485M/X70M: Cu ≤ 0.50 %; Ni ≤ 0.50 %; Cr ≤ 0.50 % and Mo ≤ 0.50%

Note 2: The minimum elongation (Af) for PSL 1 and PSL 2 is given by the following equation:

$$A_f = C \frac{A_{xc}^{0.2}}{U^{0.9}}$$

C = 1940  
 U = MPa  
 A<sub>xc</sub> = L x e  
 L = 38,10 mm  
 e = tube thickness in mm



**SERRA CATARINENSE GAS PIPELINE**



# COATED PIPES

Tuper offers an external coating service for pipes used in the transport of oil and gas, fuels and minerals. The tubes are coated with a triple layer of polyethylene (3LPE), the first being an anti-corrosion protection layer with Fusion Bonded Epoxy (FBE), the second layer the copolymeric adhesive that ensures adhesion between the layers and, finally, the third layer with high density polyethylene (HDPE) ensuring the product's mechanical protection.

The triple-layer polyethylene system is applied to pipelines that operate at temperatures ranging from -40°C to +85°C.



# STANDARDS

ABNT NBR 15221-1  
DIN 30670  
ISO 21809-1  
CSA/CAN Z245.21

# DIMENSIONS

## API 5L

Outside Diameter (OD)	Thickness*			Lenght [m]
	Epoxy (um)	Adhesive (um)	PEAD (mm)	
From 2 3/8" (60,30 mm) to 12 3/4" (323,80 mm)	From 100 to 400	From 140 to 250	From 1,5 to 3,5	From 8,00 to 13,50

Outras medidas e valores sob consulta.



# GALVANIZED RIGID CONDUITS NBR 5597 AND NBR 5598

Tuper supplies 3 and 6 meter long galvanized rigid conduits manufactured in carbon steel to arrange electrical wires and cables in a wide variety of applications, such as underground and overhead installations in commercial and industrial buildings, oil refineries, chemical plants, steel mills, infrastructure works and others.

## FINISHES

**GALVANIZED:** hot-dip galvanized pipes emulsion with subsequent finishing by air blowing, to ensure internal and external coating layer uniformity.

## STANDARDS AND DIMENSIONS

**NBR 5597 (thread NPT):** from 1/2" to 6"

**NBR 5598 (thread BSP):** from 1/2" to 6"





### NBR 5597/2013 - STEEL CONDUITS WITH NPT THREAD

Nominal Diameter		Outer Diameter	Wall Thickness	Conduit Theoretical Mass With Zinc Coating / Without Coupling		
DN	inch	mm	mm	kg/m	kg/pp	Pipe/Bundle
15	1/2	21,30	2,25	1,093	3,279	79
20	3/4	26,90	2,25	1,414	4,242	70
25	1	33,70	2,65	2,088	6,264	44
32	1.1/4	42,40	3,00	2,989	8,967	37
40	1.1/2	48,30	3,00	3,437	10,311	24
50	2	60,30	3,35	4,812	14,436	24
65	2.1/2	73,00	3,75	6,534	19,602	19
80	3	88,90	3,75	8,035	24,105	10
90	3.1/2	101,60	4,25	10,386	31,158	10
100	4	114,30	4,25	11,741	35,223	10
125	5	141,30	5,00	17,063	51,189	10
150	6	168,30	5,30	21,611	64,833	10

For weight calculations purposes, a part with 3,000 mm in length was considered. Minimum coating mass = 300 g/m<sup>2</sup>.  
Mass calculation for plain end pipes.

### NBR 5598/2013 - STEEL CONDUITS WITH BSP THREAD

Nominal Diameter		Outer Diameter	Wall Thickness	Conduit Theoretical Mass With Zinc Coating / Without Coupling		
DN	inch	mm	mm	kg/m	kg/pp	Pipe/Bundle
15	1/2	21,30	2,25	1,093	3,279	79
20	3/4	26,90	2,25	1,414	4,242	70
25	1	33,70	2,65	2,088	6,264	44
32	1.1/4	42,40	2,65	2,673	8,019	37
40	1.1/2	48,30	3,00	3,437	10,311	24
50	2	60,30	3,00	4,347	13,041	24
65	2.1/2	76,10	3,35	6,147	18,441	19
80	3	88,90	3,35	7,229	21,687	19
100	4	114,30	3,75	10,431	31,293	10
125	5	139,70	4,75	16,062	48,186	10
150	6	165,10	5,00	20,042	60,126	10

For weight calculations purposes, a part with 3,000 mm in length was considered. Minimum coating mass = 300 g/m<sup>2</sup>.  
Mass calculation for plain end pipes.





GROOVED AND PIPES



TUPER STORAGE CENTER



BLACK TUBES



PAINTED TUBES





## TUPER PRODUCT AND SERVICE EXCELLENCE

Tuper knows that excellence and cutting-edge technologies are essential for success. Therefore, all units constantly improve their technologies and processes.

In addition, the company has a solid structure for the development of new products, with laboratories equipped to perform chemical analyses, mechanical and metallurgical tests, aligned with the best concepts worldwide.



Watch our manifest

### TUPER S.A.

Avenida Prefeito Ornith Bollmann, 1441

Bairro Brasília

Zipcode 89282-427 • São Bento do Sul • SC

+55 47 3631 5000

tuper@tuper.com.br

tuper.com.br



/grupotuper

ISO 9001

ISO 14001