

Sanitary Tubes 3A ASTM A270

Dimensional Tolerances

all dimensions in inches (mm)

Size OD	Tolerances, OD	Wall thickness	Tolerances on wall thickness ^{a)}	Tolerances on Length	Weight Kg/M
1/2" (12.7)	+/-0.005" (0.13)	0.065" (1.65) /0.049" (1.25)	+/-10.0%	+1/8" (3.18)	0.4571
3/4" (19.1)	+/-0.005" (0.13)	0.065" (1.65) /0.049" (1.25)	+/-10.0%	+1/8" (3.18)	0.7218
1" (25.4)	+/-0.005" (0.13)	0.065" (1.65) /0.049" (1.25)	+/-10.0%	+1/8" (3.18)	0.9824
1-1/4" (31.8)	+/-0.008" (0.20)	0.065" (1.65)	+/-10.0%	+1/8" (3.18)	1.2412
1-1/2" (38.1)	+/-0.008" (0.20)	0.065" (1.65) /0.049" (1.25)	+/-10.0%	+1/8" (3.18)	1.5078
2" (50.8)	+/-0.008" (0.20)	0.065" (1.65) /0.049" (1.25)	+/-10.0%	+1/8" (3.18)	2.0331
2-1/2" (63.5)	+/-0.010" (0.25)	0.065" (1.65)	+/-10.0%	+1/8" (3.18)	2.5585
3" (76.2)	+/-0.010" (0.25)	0.065" (1.65)	+/-10.0%	+1/8" (3.18)	3.0797
4" (101.6)	+/-0.015" (0.38)	0.065" (1.65) /0.083" (2.11)	+/-10.0%	+1/8" (3.18)	5.2628
6" (152.4)	+/-0.030" (0.76)	0.083" (2.11)	+/-10.0%	+1" (25.4) - 0	7.9116
6" (152.4)	+/-0.030" (0.76)	0.109" (2.77)	+/-10.0%	+1" (25.4) - 0	10.3909
8" (203.2)	+0.061" (1.55) - 0.031" (0.79)	0.109" (2.77)	+/-10.0%	+1" (25.4) - 0	13.9166

***Uniform wall thickness for 1/2" through 3" size measure.065(16ga).In 4"Size, wall thickness measures .083(14ga),6" and 8" .109(12ga).

Chemical Composition

Elements	304 (wt%)	304L (wt%)	316L (wt%)
(C) Carbon, Max.	0.080	0.035	0.035
(Mn) Manganese, Max.	2.00	2.00	2.00
(P) Phosphorus, Max.	0.040	0.040	0.040
(S) Sulfur, Max.	0.030	0.030	0.030**
(Si) Silicon, Max.	0.75	0.75	0.75
(Ni) Nickel	8.0–11.0	8.0–13.0	10.0–15.0
(Cr) Chromium	18.0–20.0	18.0–20.0	16.0–18.0
(Mo) Molybdenum	N/A	N/A	2.0–3.0
(Fe) Iron	Bal.	Bal.	Bal.
(Cu) Copper	N/A	N/A	N/A
(N) Nitrogen	N/A	N/A	N/A

Product Marking

In addition to the marking prescribed in Specification A 1016/A 1016M and specified in the order, the marking shall include whether the tubing is seamless (SML), welded (WLD), or heavily cold worked (HCW), and the surface finish.



Sanitary Tubes Inch ASTM A270

Dimensional Tolerances

all dimensions in inches (mm)

Size OD	Tolerances, OD	Wall thickness	Tolerances on wall thickness ^{a)}	Tolerances on Length	Weight Kg/M
1/2" (12.7)	+/-0.005" (0.13)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	0.4185
3/4" (19.1)	+/-0.005" (0.13)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	0.6576
1" (25.4)	+/-0.005" (0.13)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	0.8930
1-1/4" (31.8)	+/-0.008" (0.20)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	1.1322
1-1/2" (38.1)	+/-0.008" (0.20)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	1.3676
2" (50.8)	+/-0.008" (0.20)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	1.8421
2-1/2" (63.5)	+/-0.010" (0.25)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	2.3166
3" (76.2)	+/-0.010" (0.25)	0.059"(1.50)	+/-10.0%	+1/8" (3.18)	2.7912
4" (101.6)	+/-0.015" (0.38)	0.079"(2.00)	+/-10.0%	+1/8" (3.18)	4.9621
6" (152.4)	+/-0.030" (0.76)	0.079"(2.00)	+/-10.0%	+1" (25.4) - 0	7.4929
6" (152.4)	+/-0.030" (0.76)	0.12"(3.05)	+/-10.0%	+1" (25.4) - 0	11.3469
8"(203.2)	+/-0.040" (1.016)	0.12"(3.05)	+/-10.0%	+1" (25.4) - 0	15.2065
10"(254)	+/-0.040" (1.016)	0.12"(3.05)	+/-10.0%	+1" (25.4) - 0	19.0661
10"(254)	+/-0.040" (1.016)	0.134"(3.4)	+/-10.0%	+1" (25.4) - 0	21.2243
12"(304.8)	+/-0.040" (1.016)	0.12"(3.05)	+/-10.0%	+1" (25.4) - 0	22.9256
12"(304.8)	+/-0.040" (1.016)	0,134"(3.4)	+/-10.0%	+1" (25.4) - 0	25.5268

Ordering Information

It is the responsibility of the purchaser to specify all requirements that are necessary for material ordered under this specification. Such requirements may be included, but are not limited to, the following:

- Quantity (feet, meters, or number of lengths).
- Name of material (austenitic steel tube).
- Process seamless (SML), welded (WLD), or heavily cold worked (HCW).
- Size (outside diameter and average wall thickness).
- Length (specific or random).
- Surface finish (see***Section 13).
- Optional requirements (product analysis, hydrostatic or nondestructive electric test).
- Test report required (Certification Section of Specification A 1016/A 1016M).
- Specification designation.
- Special requirements, and any supplementary requirements.

