

Stainless Steel Tubing

Fractional Sizes

- Standard Instrumentation Tubing
- Chemically Cleaned and Passivated Tubing
- Thermocouple Cleaned Tubing



Standard Instrumentation Tubing

- Available in sizes from 1/16 to 1 in. OD; metric sizes available upon request

Material Standards

Grade	UNS Designation	SS	AFNOR	W.-NR.	ASTM
316/316L	S31600/S31603	2353	Z2CND17-13	1.4435	A213 ^① / A 269

① Nominal wall thickness, not minimum wall thickness.

Chemical Composition Percentages

Chemical	Grade 316/316L
Chromium	17.0 to 18.0
Nickel	12.5 to 14.0
Molybdenum	2.50 to 3.00
Carbon	0.030 max

Pressure Ratings

See *Swagelok® Tubing Data* for pressure ratings.

Ordering Information and Dimensions

Select an ordering number.

Tube OD in.	Nominal Wall Thickness in.	Ordering Number	Nominal Length m (ft)	Weight kg/m
316 / 316L Seamless				
1/16	0.014	SS-T1-S-014-6ME	6 (19.7)	0.01
	0.020	SS-T1-S-020-6ME		0.01
1/8	0.028	SS-T2-S-028-6ME		0.04
	0.035	SS-T2-S-035-6ME		0.05
1/4	0.035	SS-T4-S-035-6ME		0.12
	0.049	SS-T4-S-049-6ME		0.16
	0.065	SS-T4-S-065-6ME		0.19
3/8	0.035	SS-T6-S-035-6ME		0.19
	0.049	SS-T6-S-049-6ME		0.25
	0.065	SS-T6-S-065-6ME		0.32
1/2	0.035	SS-T8-S-035-6ME		0.26
	0.049	SS-T8-S-049-6ME		0.35
	0.065	SS-T8-S-065-6ME		0.45
	0.083	SS-T8-S-083-6ME		0.55
5/8	0.049	SS-T10-S-049-6ME		0.45
	0.065	SS-T10-S-065-6ME		0.58
3/4	0.049	SS-T12-S-049-6ME	0.56	
	0.065	SS-T12-S-065-6ME	0.71	
1	0.083	SS-T16-S-083-6ME	1.2	

Chemically Cleaned and Passivated and Thermocouple Cleaned Tubing

Material Standards

Grade	UNS Designation	ASTM	ASME
316L	S31603	A269 ^①	SA213 ^①

^① Nominal wall thickness, not minimum wall thickness.

Chemical Composition Percentages

Chemical	Grade 316L
Chromium	16.0 to 18.0
Nickel	10.0 to 15.0
Molybdenum	2.00 to 3.00
Manganese	2.00 max
Silicon	0.75 max
Carbon	0.035 max
Sulfur	0.030 max

^① Tubing sizes less than 1/2 in. OD contain up to 0.040 % carbon.

Tools and Accessories

See the *Swagelok Tools and Accessories* catalog for more information.



Tube Fittings

See the *Swagelok Gaugeable Tube Fittings and Adapter Fittings* catalog for information.

Swagelok Welding System

See the *Swagelok Welding System* catalogs for information.



Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Cleaning and Packaging

Chemically Cleaned and Passivated Tubing

This tubing complies with ASTM G-93, Level A requirement for non-volatile residue levels and also meets requirements of CGA G4.1. Tubing ends are protected with polyamide nylon film and polyethylene caps. Tubing is packed in single polyethylene, heat-sealed bags.

Thermocouple Cleaned Tubing

This tubing meets the cleanliness requirements of ASTM A632-S3. Tubing ends are protected with polyethylene caps. Tubing is bulk packaged in polyethylene, heat-sealed bags.

Product	ID Finish	Cleaning Designator	External Finish
Chemically cleaned and passivated	32 $\mu\text{in.}$ R_a max	-G30	Satin
Thermocouple cleaned	Standard finish (reference ASTM A269)	-G	

Ordering Information and Dimensions

To order, add a cleaning designator to the basic ordering number.

Tube OD in.	Nominal Wall Thickness in.	Basic Ordering Number	Nominal Length ft	Weight lb/ft
316L Seamless				
1/8	0.020	6L-T2-S-020-20-	20	0.022
	0.028	6L-T2-S-028-20- ^①		0.029
1/4	0.035	6L-T4-S-035-20-		0.080
	0.049	6L-T4-S-049-20-		0.105
3/8	0.035	6L-T6-S-035-20-		0.127
	0.049	6L-T6-S-049-20-		0.171
1/2	0.035	6L-T8-S-035-20-		0.174
	0.049	6L-T8-S-049-20-		0.236
	0.065	6L-T8-S-065-20-		0.302
5/8	0.065	6L-T10-S-065-20-		0.389
3/4	0.065	6L-T12-S-065-20-		0.476
1	0.083	6L-T16-S-083-20-		0.813

^① For thermocouple cleaned tubing only.