

**Standard Specification for**

Designation: A 778 - 01

**Welded, Unannealed Austenitic Stainless Steel Tubular**

**Products**



**Table 1 Chemical Requirements**

Grade	UNS	Carbon, max	Manganese, max	Phosphorus, max	Composition, %				
					Sulfur, max	Silicon, max	Chromium	Nickel	Molybdenum
TP 304L	S30403	0.030	2.00	0.045	0.030	1.00	18.0-20.0	8.0-13.0	-
TP 316L	S31603	0.030	2.00	0.045	0.030	1.00	16.0-18.0	10.0-14.0	2.00 3.00
TP 317L	S31703	0.030	2.00	0.045	0.030	1.00	18.0-20.0	11.0-15.0	3.0 4.0
TP 321	S32100	0.08	2.00	0.045	0.030	1.00	17.0-19.0	9.0-12.0	-
TP 347	S34700	0.08	2.00	0.045	0.030	1.00	17.0-19.0	9.0-12.0	-

**Significance and Use:**

It is anticipated that the ASTM Subcommittees A01.06, A01.10, A01.17, A01.22, and A01.28 will use the Standard composition limits listed in this specification for the grades identified by the corresponding UNS designation in the product specification unless there is a specific technical justification for doing otherwise. The compositions in this specification shall not be considered as chemical requirements for any particular product until adopted by the subcommittee overseeing that product.

**Scope:**

This specification covers straight seam and spiral butt seam welded unannealed austenitic stainless steel tubular products intended for low and moderate temperatures and corrosive service where heat treatment is not necessary for corrosion resistance. Table 1 lists the five grades covered by this specification. The user of this specification should be aware that a minimum amount of testing and examination is required of the basic product. The user requiring additional testing or examination is referred to the supplemental requirements or Ordering Information, or both. Users requiring a tubular product with post-weld heat treatment or with radiographic examination are referred to Specification A 312/ A 312M, A 358/ A358M, or A 409/A409M, as applicable.

**Table 2 Tensile Requirements**

Grade	UNS Designation	Tensile Strength, min, Ksi (MPa)
TP 304L	S30403	70(485)
TP 316L	S31603	70(485)
TP 317L	S31703	75(515)
TP 321	S32100	75(515)
TP 347	S34700	75(515)

This specification covers welded unannealed tubular products 3 in. (75mm) through 48 in. (1200mm) in outside diameter and in nominal wall thickness of 0.062 in. (1.5mm) through 0.500 in. (12.5mm) produced to this specification. Tubular products having other diameters or wall thickness, or both, may be furnished provided it complies with all other requirements of this specification.