ASTM-B313

Tubes are produced from formed sheet and seam welded by continuous methods. None alloys in various tempers are covered.
Alloy and temper designations are in compliance with the latest version of ANSI H35.1

Tolerances for the tubes we supply are shown in the tolerance tab (*https://alfiniti.com/wp-content/uploads/2022/11/STANDARD-TOLERANCES-Extruded-Tube.pdf*) and are in compliance with the latest revision of ANSI H35.2 and Aluminum Standards and Data.

A complete copy of this specification may be purchased at *www.ASTM.org*
A copy of ANSI H35.1 and H35.2 is available from the American National Standards Institute @ *www.ansi.org*
A copy of the Aluminums Standards and Date is available from the Aluminum Association at *www.aluminum.org*

Chemical Composition Limits

Alloy	Sillicon	Iron	Copper	Maganese	Magnesium	Chromium	Zinc	Titanium	Other Elements		Aluminum
									Each	Total	
1100	*F*	*F*	0.05-0.20	0.05	. . .	. . .	0.1	. . .	0.05	0.15	99.0 min
3003	0.6	0.7	0.05-0.20	1.0-1.5	. . .	. .	0.1	. . .	0.05	0.15	remainder
6061	0.40-0.8	0.7	0.15-0.40	0.15	0.8-1.2	0.04-0.35	0.25	0.15	0.05	0.15	remainder

Tensilel Property Limits, Inch-Pout Units

Temper	Specified Thickness, in	Tensile Strength, ksi		Yield Strength (0.2% offset), ksi		Elongation in 2in, or 4x Diameter, min%
		min	max	min	max	
Aluminum 1100						
O	0.032-0.050	11.0	15.5	3.5	. . .	25
	0.051-0.125	11.0	15.5	3.5	. . .	30
H12	0.032-0.050	14.0	19.0	11.0	. . .	6
	0.051-0.113	14.0	19.0	11.0	. . .	8
	0.114=0.125	14.0	19.0	11.0	. . .	9
H14	0.032-0.050	16.0	21.0	14.0	. . .	4
	0.051-0.113	16.0	21.0	14.0	. . .	5
	0.114-0.125	16.0	21.0	14.0	. . .	6
H16	0.032-0.050	19.0	24.0	17.0	. . .	3
	0.051-0.125	19.0	24.0	17.0	. . .	4
H18	0.032-0.050	22.0	. . .	. . .	. . .	3
	0.051-0.125	22.0	. . .	. . .	. . .	4

Tensilel Property Limits, Inch-Pout Units

Temper	Specified Thickness, in	Tensile Strength, ksi		Yield Strength (0.2% offset), ksi		Elongation in 2in, or 4x Diameter, min%
		min	max	min	max	
			Alloy 3003			
O	0.032-0.050	14.0	19.0	5.0	. . .	23
	0.051-0.125	14.0	19.0	5.0	. . .	25
H12	0.032-0.050	17.0	23.0	12.0	. . .	5
	0.051-0.113	17.0	23.0	12.0	. . .	6
	0.114=0.125	17.0	23.0	12.0	. . .	7
H14	0.032-0.050	20.0	26.0	17.0	. . .	4
	0.051-0.113	20.0	26.0	17.0	. . .	5
	0.114-0.125	20.0	26.0	17.0	. . .	6
H16	0.032-0.050	24.0	30.0	21.0	. . .	3
	0.051-0.125	24.0	30.0	21.0	. . .	4
H18	0.032-0.050	27.0	29.0	24.0	. . .	3
	0.051-0.125	27.0	29.0	24.0	. . .	4
			Alloy 6061			
O	0.032-0.125	. . .	22.0	. . .	12.0	16
T4	0.032-0.126	30.0	. . .	16.0	. . .	16
T6	0.032-0.127	42.0	. . .	35.0	. . .	10

Tensilel Property Limits, [SI Units]

Temper	Specified Thickness, mm		Tensile Strength, Mpa		Yield Strength (0.2% offset,) Mpa		Elongation min, % in 50 mm
	over	through	min	max	min	max	
			Aluminum 1100				
O	0.80	1.20	75	105	25	. . .	22
	1.20	3.20	75	105	25	. . .	30
H12	0.80	1.20	95	130	75	. . .	5
	1.20	3.20	95	130	75	. . .	8
H16	0.80	1.20	130	165	115	. . .	3
	1.20	3.20	130	165	115	. . .	4
H18	0.80	1.20	150	. . .	. . .	. . .	2
	1.20	3.20	150	. . .	. . .	. . .	4

Tensilel Property Limits, [SI Units]

Temper	Specified Thickness, mm		Tensile Strength, Mpa		Yield Strength (0.2% offset,) Mpa		Elongation min, % in 50 mm
	over	through	min	max	min	max	
Alloy 3003							
O	0.80	1.20	95	130	35	. . .	22
	1.20	3.20	95	130	35	. . .	25
H12	0.80	1.20	120	160	85	. . .	4
	1.20	3.20	120	160	85	. . .	6
H14	0.80	1.20	140	180	115	. . .	3
	1.20	3.20	140	180	115	. . .	5
H16	0.80	1.20	165	205	145	. . .	3
	1.20	3.20	165	205	145	. . .	4
H18	0.80	1.20	185	. . .	165	. . .	2
	1.20	3.20	185	. . .	165	. . .	4
Alloy 6061							
O	0.80	3.20	. . .	150	. . .	85	16
T4	0.80	3.20	205	. . .	110	. . .	16
T6	0.80	3.20	290	. . .	240	. . .	10