

1100

ALUMINUM ALLOY TECHNICAL SPECIFICATION SHEET

GENERAL: Having a minimum of 99.0% aluminum, this non-heat treatable alloy is also known as commercially pure aluminum. This alloy combines excellent formability and a very high corrosion resistance for use in many applications where high strength is not required. Applications include solid rivets for use in outdoor furniture and cookware; decorative parts and chains; and wire forms, such as screens and grilles. This alloy can be used in most any climate without worry. A very good anodizing finish can be obtained, especially with special finishes listed below.

CHEMICAL COMPOSITION¹: Compositions in % max, unless otherwise specified.

Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others		Al (min)
									Each	Total	
0.095 Si + Fe		0.05-0.20	0.05	-	-	-	0.10	-	0.05	0.15	Balance

¹ Complying with Aluminum Association, ASTM and Federal Specifications

MECHANICAL PROPERTIES AND CHARACTERISTICS

Although Beneke Wire Co makes every effort to provide you with accurate values in this section, when using for design purposes please consult with the Beneke technical staff or refer to any relevant standards and/or specifications,

Temper	Max Diameter ⁵ (inches)	Ultimate Tensile		Typical Shear ^{3,4} (ksi)	Typical % El ⁴ (in 2")	Resistance to Corrosion		Formability ²	Machinability ²
		Specification ¹ (ksi)	Typical ⁴ (ksi)			General ²	SCC ²		
1100-0	.715	15.5 max	12.5	9	35	A	A	A	E
-H12	.715	14.0 min	16.0	10	12	A	A	A	E
-H14	.650	16.0-21.0	17.5	11	9	A	A	A	D
-H16	.650	19.0 min	21.0	12	6	A	A	B	D
-H18	.455	22.0 min	24.5	13	5	A	A	B	C

¹ Complying with Aluminum Association, ASTM and Federal Specifications

² Ratings A-E are relative ratings in decreasing order of merit

³ Industry averages as published by Aluminum Association. Should not be used for design purposes

⁴ Computed Beneke averages. Should not be used for design purposes

⁵ Larger sizes may be available subject to inquiry

FINISHES: The 1100 alloy is one of the best "cosmetic" alloys". This alloy is typically used in a standard finish. The following options are available for those special applications that may require an extra advantage.

- 1) **#4 Finish** - A lustrous finish especially applicable for cold heading. This oxide free surface greatly improves tool life and uniformity in metal flow while heading. Product has enhanced, shiny appearance and will anodize well.
- 2) **Bright Finish** - Clean, chrome-like finish comparable to stainless or chrome finish on steel; improves cosmetic appearance of aluminum wire.