

2017

ALUMINUM ALLOY TECHNICAL SPECIFICATION SHEET

GENERAL: Moderate levels of copper, along with a small magnesium addition give this alloy added strength during solution heat treatment and aging. It has excellent machining characteristics in the heat treated tempers and can be found in many machining applications. This alloy is also utilized in a variety of cold heading applications in the aerospace and automotive markets. Solid, semi-tubular and tubular rivets are commonly made from alloy 2017 as well as bolts, plugs, balls, and high strength pins.

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

Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others		Al (min)
									Each	Total	
0.20-0.8	0.7	3.5-4.5	0.4-1.0	.40-.8	0.10	-	0.25	0.15	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 (ksi)	Typical % El ³ (in 10")	Resistance to Corrosion		Formability ²	Machinability ²
		Specification ¹ (ksi)	Typical ⁴ (ksi)			General ²	SCC ²		
2017-0	.515	35.0 max	29.0	19.5	21	D	B	B	D
-H12	.515	-	31.0	21.5	-	D	B	B	D
-H13	.515	30.0-40.0	33.5	22.5	-	D	B	B	C
-H15	.375	-	40.5	27.0	-	D	B	C	C
-T3	.375	-	71.8	48.0	-	D	C	D	B
-T4	.515	55.0 min	61.5	41.0	18	D	C	D	B

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: Below is a listing of available finishes for 2017 alloy. Cold heading characteristics in H-tempers and machinability in T-tempers are greatly improved with these finishes

1) **#4 Finish** - A lustrous finish specifically 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) **DOX Finish** - A satiny white finish specifically used on heat treated cold heading wire and rod. This oxide free surface greatly improves uniformity in metal flow during heading, thus giving the added advantage needed when heading heat treated wire and rod.

3) **MICRO Finish** - A bright, lustrous finish applicable only to heat treated wire. This oxide free surface is particularly useful in escomatic wire or any application where close tolerances in diameter are required. Improved corrosion resistance is one of many advantages.