

**6056**

## ALUMINUM ALLOY TECHNICAL SPECIFICATION SHEET

**GENERAL:** An optimum balance of Magnesium, Silicon and Copper combined with specialized heat treatment practices give alloy 6056 its main characteristics. 6056 provides mechanical properties approaching that of 2024 with superior corrosion resistance, machinability and welding properties. With an acceptable working temperature near 300° F, 6056 is specifically suited for many automotive applications.

**CHEMICAL COMPOSITION<sup>1</sup>:** Compositions in % max, unless otherwise specified.

Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti+Zr	Others		Al (min)
									Each	Total	
.7 – 1.3	0.50	.50 – 1.1	.40 – 1.0	.6 – 1.2	.25	-	.10 - .7	0.20	0.05	0.15	Balance

<sup>1</sup> 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 <sup>5</sup> (inches)	Ultimate Tensile		Typical Shear <sup>4</sup> (ksi)	Typical % El <sup>4</sup> (in 10")	Resistance to Corrosion		Formability <sup>2</sup>	Machinability <sup>2</sup>
		Specification <sup>1</sup> (ksi)	Typical <sup>4</sup> (ksi)			General <sup>2</sup>	SCC <sup>2</sup>		
6056-O	.715	-	22.0	15.0	25	B	A	A	D
-H12	.715	-	27.7	-	-	B	B	A	D
-H13	.715	-	30.3	20.0	-	B	B	A	D
-H15	.625	-	32.8	-	-	B	B	B	C
-H18	.455	-	42.0	-	-	B	B	B	C
-T6	.715	-	57.0	39.0	12	B	A	C	B

<sup>1</sup> Complying with Aluminum Association, ASTM and Federal Specifications

<sup>2</sup> Ratings A-E are relative ratings in decreasing order of merit

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

<sup>4</sup> Computed Beneke averages. Should not be used for design purposes

<sup>5</sup> Larger sizes may be available subject to inquiry

### FINISHES:

Below is a list of available finishes for 6056 alloy. These finishes can greatly improve cold heading and machinability of this alloy. Some success has been attained in cold heading 6056 in T-temperatures with Beneke special finishes:

- #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.
- 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.
- 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.