Technical Data

ROD & BAR ALLOY 6026

ALLOY DESCRIPTION

Developed for general engineering applications, this alloy emphasizes the free-machining characteristics and excellent as-machined surface finish preferred by the machine parts industry (e.g., household appliances, tooling, electrical equipment). It performs well in anodizing operations and is corrosion-resistant. Cold-finished 6026 products offer strength comparable to 6061 products of the same size and temper. This alloy was also developed to comply with European Union Directives 2011/65/EU(RoHS2) and 2015/863/EU(RoHS3).

TYPICAL MECHANICAL PROPERTIES

Temper	Thickness Range	Tensile (.500" Dia. Specimen)				
		Ultimate		Yield		Elongation /4D
	Inch (mm)	KSI	MPa	KSI	MPa	%
T8	0.40" - 3.50" (10.2 – 89.0)	54.0	370	53.0	365	14
T6	3.50" - 8.00" (89.0 – 200)	51.0	350	49.0	340	15

COMPARATIVE CHARACTERISTICS

Temper	Corrosion Resistance		Cold Workability[3]	Machinability[3]	Anodize Response[3]	Brazeability[4]	Weldability[4]		
	General[1]	Stress[2]					Gas	Arc	Spot
T8	B	A	D	B+	A	C	B	B	B
T6	B	A	D	B+	A	C	B	B	B

1 Ratings A through E are relative ratings in decreasing order of merit, based on exposures to sodium chloride solution by intermittent spraying or immersion. Alloys with A and B ratings can be used in industrial and seacoast atmospheres without protection. Alloys with C, D and E ratings generally should be protected at least on faying surfaces.

2 Stress-corrosion cracking ratings are based on service experience and on laboratory tests of specimens exposed to the 3.5% sodium chloride alternate immersion test.
A= No known instance of failure in service or in laboratory tests.
B= No known instance of failure in service; limited failures in laboratory tests of short transverse specimens.
C= Service failures with sustained tension stress acting in short transverse direction relative to grain structure; limited failures in laboratory tests of long transverse specimens.
D= Limited-service failures with sustained longitudinal or long transverse areas.

3 Ratings A through D for Workability (cold), A through E for Machinability and A through C for Anodize Response, are relative ratings in decreasing order of merit.

4 Ratings A through D for Weldability and Brazeability are relative ratings defined as follows: A= Generally weldable by all commercial procedures and methods.
B= Weldable with special techniques or for specific applications that justify preliminary trials or testing to develop welding procedure and weld performance. C= Limited weldability because of crack sensitivity or loss in resistance to corrosion and mechanical properties.
D= No commonly used welding methods have been developed.

AVAILABLE SPECIFICATIONS

ASTM B211-23

CHEMICAL COMPOSITION LIMITS

Weight %	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Bi	Others, Each[1]	Others, Total
Minimum	0.6	0	0.20	0.20	0.6	0	0	0	0.50	0	0
Maximum	1.4	0.7	0.50	1.0	1.2	0.30	0.30	0.20	1.5	0.05	0.15

1.Maximum 0.05 wt. %Pb and 0.05 wt.% Sn

TYPICAL PHYSICAL PROPERTIES

Characteristics		English	Metric
Nominal Density		0.099	2.73
Melting Range		1031 to 1211 F	555 to 655 C
Coefficient of Thermal Expansion		12.9 x10^6/ F	23.4 x10^6/ C
Thermal Conductivity		99.9 BTU/ (hr.- ft.- F) 25 C	172 W/m-K
Electrical Conductivity		(20 - 26 MS/m)	(34 - 45% IACS)

This information illustrates the properties of rod and bar alloy 6026 products in a limited number of tests. Users must conduct their own development testing to determine the fitness for the intended end use.