

Aluminium – General Machining

DEK Reference ID:										
DSM 2.1.1										
Material Name EN:										
EN AW-6082										
Material Group:										
Aluminium Alloy with major alloying element: MgSi.										
Characteristics:										
Very good corrosion resistance. Very good weldability; reduced strength values in the zone of welding. Good machinability. Good cold formability in T4 temper after a stabilizing heat treatment. Heat treatable medium high strength construction. Alloy with a strength somewhat higher than 6061. Medium high fatigue strength. Not suitable for complex sections.										
Chemical Composition (subset C, Si, Mn, Cr, Ni):										
Si (%) - Min	Si (%) - Max	Fe (%) - Max	Cu (%) - Max	Mn (%) - Min	Mn (%) - Max	Mg (%) - Min	Mg (%) - Max	Cr (%) - Max	Zn (%) - Min	Zn (%) - Max
0.70	1.30	0.50	0.10	0.40	1.0	0.60	1.20	0.25	0	0.20
Properties: T6										
Density (g/cm ³)	Young's modulus (GPa)	Yield Stress YS Min MPa	Yield Stress YS Max MPa	Tensile Strength TS Min MPa	Tensile Strength TS Max MPa	Elongation A (%)				
2.70	70	240	260	270	290	8-6				
Temper Types: Preferred Temper Types are in:										
0	Soft, fully annealed									
T4	Solution heat treated and naturally aged to a substantially stable condition									
T6	Solution heat treated and artificially aged									
T651	Like T6 with additional stress released									
Note:	The temper condition must appear on the drawing:- DSM 2.1.1_T6									
Material Safety Data Sheet:										
  MSDS Series 6xxx.pdf										
Approved Standards:										
Material Number	Country	Product				Standard's Name	Edition			
EN AW-6082	Japan	Sheet plate and strip				JIS H 4000	2014			
EN AW-6082	Japan	Bar and wire				JIS H 4040	2015			
EN AW-6082	Japan	Tube extruded and cold drawn				JIS H 4080	2015			
EN AW-6082	Japan	Welded pipes and tubes				JIS H 4090	2015			
EN AW-6082	Japan	Extruded profile				JIS H 4100	2015			

Issue	01	02	03	04	05	06	07	08	09
Date			7135	31278	44721	44841	45159	24/06/21	

Approved Standards:				
Material Number	Country	Product	Standard's Name	Edition
EN AW-6082	China	Wrought aluminium and aluminium alloys	GB/T 3190	2020
EN AW-6082	India	Bars, sections	IS 733	1983
EN AW-6082	India	Forgings	IS 734	1975
EN AW-6082	India	Plate	IS 736	1986
EN AW-6082	India	Sheet and strip	IS 737	2008
EN AW-6082	India	Tube, drawn	IS 738	1994
EN AW-6082	India	Wire	IS 739	1992
EN AW-6082	India	Extruded tubes, hollow sections	IS 1285	2002
EN AW-6082	ISO	Unalloyed aluminium and aluminium alloys	ISO 209	2007
EN AW-6061-T6	Japan	Sheet plate and strip	JIS H 4000	2014
EN AW-6061-T6	Japan	Bar and wire	JIS H 4040	2015
EN AW-6061-T6	Japan	Tube extruded and cold drawn	JIS H 4080	2015
EN AW-6061-T6	Japan	Welded pipes and tubes	JIS H 4090	2015
EN AW-6061-T6	Japan	Foils	JIS H 4160	2015

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