

Aluminium – General Fabrication

DEK Reference ID:										
DSM 2.1.13										
Material Name EN:										
EN AW-5052										
Material Group:										
Aluminium Alloy with major alloying element: Mg										
Characteristics:										
Very good corrosion resistance to seawater and marine and industrial atmosphere. Good cold formability. It is a medium to high strength alloy with a strength slightly higher than 5251 and a medium to high fatigue strength.										
Chemical Composition (subset C, Si, Mn, Cr, Ni):										
Si(%) – Min	Si(%) – Max	Fe(%) – Max	Cu(%) – Max	Mn(%) – Max	Mg(%) – Min	Mg(%) – Max	Cr(%) – Min	Cr(%) – Max	Zn(%) – Min	Zn(%) – Max
0	0.25	0.40	0.10	0.10	2.20	2.80	0.15	0.35	0	0.10
Properties:										
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 (%)				
2.68	70	130	193	210	260	17				
Material Safety Data Sheet:										
  MSDS Series 5xxx.pdf										
Temper Types: Preferred Temper Types are in:										
0	Soft, fully annealed.									
H32	Work hardened by rolling then stabilised by low-temperature heat treatment to ¼ hard.									
H34	Work hardened by rolling then stabilised by low-temperature heat treatment to ½ hard.									
H36	Work hardened by rolling then stabilised by low-temperature heat treatment to ¾ hard.									
H38	Work hardened by rolling then stabilised by low-temperature heat treatment to full hard.									
Note:	The temper condition must be added to the drawing:- DSM 2.1.13_H32									
Material Number	Country	Product				Standard's Name		Edition		
EN AW-5052	USA	Sheet and Plate				ASTM B209		2014		
EN AW-5052	USA	Wire, rod and bar, rolled or cold finished				ASTM B211/ M		2019		
EN AW-5052	USA	Tube, drawn, seamless				ASTM B210/ M		2019		
EN AW-5052	USA	Tube, drawn				ASTM B483/ M		2020		
EN AW-5052	USA	Wire, rod, bar, profiles, tube, extruded				ASTM B221		2014		
EN AW-5052	USA	Tube, extruded, seamless				ASTM B241/ M		2016		
EN AW-5052	USA	Tube, condenser				ASTM B234		2017		

Approved Standards:

Material Number	Country	Product	Standard's Name	Edition
EN AW-5052	USA	Tube, condenser with integral fins	ASTM B404/ M	2002
EN AW-5052	USA	Tube welded	ASTM B313/ M	2009
EN AW-5052	USA	Tube welded	ASTM B54/ M	2010
EN AW-5052	USA	Rivet wire and rod	ASTM B316/ M	2015
EN AW-5052	USA	Sheet and Plate	AMS-QQ-A-250/8	2014
EN AW-5052	USA	Wire, rod and bar, rolled or cold finished	AMS-QQ-A-225/7	2018
EN AW-5052	USA	Tube, drawn, seamless	WW-T-700/4	2018
EN AW-5052	USA	Rivet wire and rod	QQ-A-430	2019
EN AW-5052	USA	Sheet and Plate	AMS 4015	2018
EN AW-5052	USA	Sheet and Plate	AMS 4016	2013
EN AW-5052	USA	Sheet and Plate	AMS 4017	2018
EN AW-5052	USA	Wire, rod and bar, rolled or cold finished	AMS 4114	2012
EN AW-5052	USA	Tube, drawn, seamless	AMS 4069	2015
EN AW-5052	USA	Tube, drawn, seamless	AMS 4070	2015
EN AW-5052	USA	Tube, hydraulic	AMS 4071	2017
EN AW-5052	USA	Foil	AMS 4004	2015
EN AW-5052	Japan	Sheet plate and strip	JIS H 4000	2014
EN AW-5052	Japan	Bar and wire	JIS H 4040	2015
EN AW-5052	Japan	Tube extruded and cold drawn	JIS H 4080	2015
EN AW-5052	Japan	Welded pipes and tubes	JIS H 4090	2015
EN AW-5052	Japan	Foils	JIS H 4160	2015
EN AW-5052	China	Wrought aluminium and aluminium alloys	GB/T 3190 A	2008
EN AW-5052	ISO	Unalloyed aluminium and aluminium alloys	ISO 209	2007

Alternatives:

The vendor may permanently substitute this material for En AW-AlMg2,5 (5052) at an equivalent temper state without prior permission from ASM unless otherwise stated on the engineering drawing. Any substitution must be recorded on the first article for the component to which it applies.

Issue	01	02	03	04	05	06	07	08	09
Date	N/A	24/06/21							