

Designation	AlMg3	DIN	EN Nr.	UNS (ASTM)	AISI	WCA
		3.3535	AW-5754		-	925

Chemical composition

Al	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others*
Bal.	≤ 0.40	≤ 0.40	≤ 0.10	≤ 0.50	2.60 - 3.60	≤ 0.30	≤ 0.20	≤ 0.15	≤ 0.15

Values (Weight %). In order to achieve maximum homogeneity and consistent quality, the actual manufacturing tolerances are tighter and more precisely than the composition indicated.

* Total 0.15 % max, individually 0.05% max.

Main technical properties and features

Among the aluminum alloys, the Peraluman 300 offer a relatively high mechanical properties in the cold rolled temper. Its corrosion resistance, especially in the salt water and the industrial field is very good. The Peraluman 300 has an excellent polishing ability but is not appropriate for anodizing and its brazability is low. The electrical conductivity of the Peraluman 300 is lower than those of pure aluminum (62% IACS) and is about one third of that of pure copper.

Typical uses

Due to its excellent corrosion resistance, the Peraluman 300, AlMg3 is widely used in the chemical and food industry as well as for furnishing, aerospace and marine applications.

Typical manufacturing range

	Thickness (mm)	Width (mm)	Length (mm)
Rolled products Strip in coils ^[1]	0.10 - 1.50	3 - 140	-
Strip as sheets ^[1]	0.10 - 1.50	10 - 120	500 - 3000

^[1] Not all our production possibilities are presented here. Other dimensions or product forms available upon request. Some combinations of thicknesses and widths are not possible.

Mechanical properties of strips

Temper			R _m (N/mm ²)	R _{p0.2} (N/mm ²)	A _{50mm} (%)	Hardness HV
R190	H45	annealed	190 - 250	60 - 160	8 min.	45 - 75
R300	H90	hard	300 - 380	200 min.	-	90 - 130

Physical properties

Modulus of elasticity	kN/mm ²	70.5
Poisson ratio		0.3
Density	g/cm ³	2.68
Melting point	°C	600
Linear dilatation coefficient	10 ⁻⁶ ./ °C	23.7
Thermal conductivity at 20°C	W/m °K	132
Electrical resistivity	μΩcm	5.305
Electrical conductivity	MS/m	18.85
Electrical conductivity	% IACS	32.5
Specific heat at 20°C	J/(kg.K)	897
Magnetic properties		Non magnetic

Tolerances (strip and foil)

Thickness	Thickness (mm)		EN Standard		WEBER + CALIBRA		
	≥	<	10140 Precision	10258 Precision	WCA Standard	WCA Precision	WCA Extreme
<p>The table shown is an outline of our typical thickness tolerances available. They are tighter than industry standards.</p> <p>Our "WCA Precision" and "WCA Extreme" tolerances are available upon request.</p>	-	0.025	-	-	-	-	± 0.001
	0.025	0.050	-	-	± 0.003	± 0.002	± 0.0015
	0.050	0.065	-	± 0.003	± 0.003	± 0.0025	± 0.002
	0.065	0.100	-	± 0.004	± 0.004	± 0.0035	± 0.003
	0.100	0.125	± 0.005	± 0.006	± 0.005	± 0.004	± 0.003
	0.125	0.150	± 0.005	± 0.006	± 0.005	± 0.005	± 0.004
	0.150	0.250	± 0.010	± 0.008	± 0.008	± 0.006	± 0.004
	0.250	0.300	± 0.010	± 0.009	± 0.009	± 0.007	± 0.005
	0.300	0.400	± 0.010	± 0.010	± 0.010	± 0.007	± 0.005
	0.400	0.500	± 0.015	± 0.012	± 0.012	± 0.008	± 0.006
	0.500	0.600	± 0.015	± 0.014	± 0.014	± 0.010	± 0.007
	0.600	0.800	± 0.015	± 0.015	± 0.015	± 0.010	± 0.007
	0.800	1.000	± 0.015	± 0.018	± 0.018	± 0.012	± 0.009
	1.000	1.200	± 0.020	± 0.020	± 0.020	± 0.015	± 0.012
	1.200	1.250	± 0.020	± 0.020	± 0.020	± 0.015	± 0.012
1.250	1.500	± 0.020	± 0.020	± 0.020	± 0.015	± 0.014	
Width	Our width tolerances "Standard" is +0.2, -0.0 (or ± 0.1 mm upon request). They are available for slit widths < 125 mm and thicknesses < 1.00 mm. Special tolerances upon request.						
Camber	Width (mm)		Camber max. (mm/m)				
<p>Our tolerance "WCA Standard" respects the EN Standard 1654 (Length of measurement 1000 mm). Other tolerances upon request.</p>			WCA Standard		WCA Extreme		
	>	≤	≤ 0.5 mm	> 0.5 mm	≤ 0.5 mm	> 0.5 mm	
	3	6	12	-	6	-	
	6	10	8	10	4	5	
	10	20	4	6	2	3	
20	250	2	3	1	1.5		
Surface	Special surface qualities upon request						
Flatness	Special requirement on the longitudinal or transversal flatness upon request						

WCA-MK.034 / Edition 2024/02

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