

MATERIAL DATASHEET

ROLLED SHEETS EN AW 5754 [AlMg3]

The EN AW-5754 aluminum alloy belongs to the 5000 series and is based on a combination of aluminum and magnesium. It is known for its excellent corrosion resistance, especially in marine environments, as well as its high strength compared to other 5000 series alloys. EN AW-5754 is very easy to weld and offers good formability, making it versatile, especially in the transportation and construction industries. The alloy retains its mechanical properties even under dynamic loads, making it ideal for structurally stressed applications.

Typical applications of EN AW-5754 are:

- Automotive industry: body parts, tanks, interior panels and floor panels that require a combination of strength and low weight
- Shipbuilding: hulls, decks and other parts exposed to the salty marine environment
- Construction industry: noise barriers, cladding and structures that must be weather-resistant
- Food industry: containers and tanks for food products, as the alloy is suitable for contact with foodstuffs

Chemical composition (according to EN 573-3:2013 in %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Sn	Sonstige
0,40	0,40	0,10	0,50	2,60 – 3,60	0,30	0,20	0,15	0	0	max. 0,15

Mechanical properties (according to EN 485-2:2016, minimum values)

Temper	Thickness [mm]	R _{p0,2} [MPa]	R _m [MPa]	A [%]	A ₅₀ [%]	Biegeradius [t]	
						180°	90°
0 / H111	0,2 – 0,5	80	190 – 240	-	12	0,5	0
	0,5 – 1,5	80	190 – 240	-	14	0,4	0,5
	1,5 – 3,0	80	190 – 240	-	16	1,0	1
	3,0 – 12,5	80	190 – 240	-	18	1,0	1
H14	0,5 – 0,5	190	240 – 280	-	3	-	-
	0,5 – 1,5	190	240 – 280	-	3	-	-
	1,5 – 3,0	190	240 – 280	-	4	-	-
	3,0 – 6,0	190	240 – 280	-	4	-	-
	6,0 – 12,5	190	240 – 280	-	5	-	-
H22	0,2 – 0,5	130	220 – 270	-	7	1,5	0,5
	0,5 – 1,5	130	220 – 270	-	8	1,5	1,5
	1,5 – 3,0	130	220 – 270	-	10	2,0	1,5
	3,0 – 6,0	130	220 – 270	-	11	-	1,5
	6,0 – 12,5	130	220 – 270	-	10	-	2,5

Temper descriptions

0 / H111	Annealed and slightly strain-hardened during subsequent operations such as stretching or leveling
H14	Strain-hardened - 1/2 hard
H16	Strain-hardened - 3/4 hard
H22	Strain-hardened and partially annealed - 1/4 hard

Reference values for physical properties

Density [g/cm ³]	Elastic modulus [GPa]	Thermal conductivity [W/m ² K]	Thermal expansion [K * 10 ⁶] 20°C – 100°C	Specific heat [J / KG * K]	Electrical conductivity [m/Ω*mm ²]	Shear modulus [GPa]
2,67	70,5	140 - 160	23,6	-	20 - 23	26,5

Other data (empirical values)

Mechanical processing

Milling / Turning	3
Eroding	1

Forming

Bending	2
Upsetting	3
Pressure forming	4

Welding

Gas	2
WIG	1
MIG	1
Resistance welding	3

Solder

Brazing with flux	5
Brazing without flux	4
Soft with flux	5

Surface treatment

Technical anodizing	1
Decorative anodizing	2 (Nur EQ)
Powder coating	1
Wet painting	1

Corrosion resistance

Normal climate	1
Sea climate	1 - 2

1 - Very good | 2 - Good | 3 - Moderate | 4 - Poor | 5 - Unsuitable

Zulassungen

EUROCODE nach DIN EN 1999-1-1	Lebensmittelindustrie nach DIN EN 602	REACH	ROHS
✓	✓	✓	✓

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