Technical Datasheet

EN AW-5454 / AlMg3Mn

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BRIEF DESCRIPTION

Alloy 5454 is used for apparatus and machine parts which are subjected to moderate stress.

Examples include welded machines and assemblies, brake hubs for motorcycles, pressure vessels, electronic cupboard.

PROCESSING METHODS

Weldability

• TIG/MIG	excellent
Filler alloy	AA 5554
	AA 5356
• by resistance	excellent

Anodizing

• technical	excellent
• decorative	moderate

Machinability good

Corrosion Behaviour

- excellent in inland atmosphere
- good in marine atmosphere

AVAILABILITY

5454 sheets and plates are available in tempers H111 all thicknesses and for a limited thickness range also in tempers H12/22/32, H14/24/34, and H16/26/36.

Thickness	Max. width
1.0 - 6 mm	2500 mm
6 - 20 mm	2200 mm
20 – 100 mm	2000 mm

CHEMICAL COMPOSITION (weight %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti +Zr
max. 0.25	max. 0.4	max. 0.10	0.50 1.00	2.4 3.0	0.05 0.20	max. 0.25	max ----

PHYSICAL PROPERTIES (nominal values)

Density	2.67 g/cm^3
Elastic Modulus	70000 MPa
Lin. thermal expansion coefficient (20°-100°C)	23.8 10^{-6} K^{-1}
Thermal conductivity	130 - 140 W/mK
Electrical conductivity (20°C)	19 - 21 MS/m

MECHANICAL STRENGTH

Min. tensile properties (EN Standard 485-2)

Thickness (over ... to)	Rm [MPa]	Rp0.2 [MPa]	A50 [%]
Tempers 0 / H111			
1.0 - 6 mm	215	85	12-17
6 - 80 mm	215	85	18
Temper H22/32			
1.0 - 25 mm	250	180	5
Temper H24/34			
1.0 - 15 mm	270	200	4
Temper H26/36			
1.0 – 6.0 mm	290	230	3