

Data Sheet EN AW 5083 – Rolled products Alumeco A/S		Internal alloy name: 5083 International alloy name: EN AW 5083 Chemical Symbol: EN AW – AlMg4,5Mn0,7 DIN-Werkstoff no.: 3.3547 Alloy type: Non heat treatable alloy
Main usage • Machining • Machinery • Forgings • Tools • Heavy duty structures • Hydraulics systems • Marine and offshore	Main properties • Very good atmospheric corrosion resistance • Very good workability • Good machinability	Important norms and literature Rolled products: EN 485-1: Technical conditions for inspection and delivery EN 485-2: Mechanical properties EN 485-3: Tolerances on dimensions and form hot rolled products EN 485-4: Tolerances on dimensions and form cold rolled products Chemical composition: EN 573-3: Chemical composition Usages: EN 13195: Specifications for wrought products for marine applications EN 602: Usage in the food industry

Chemical composition (%) EN 573-3

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other elements	
								Each	together
0.4	0.4	0.10	0.40-1.0	4.0-4.9	0.05-0.25	0.25	0.15	0.05	0.15

Typical mechanical properties EN 485-2

Thickness range (mm)	Temper	Rm MPa	Rp0,2 MPa	A _{50 mm} / A %	Hardness* HB	Bend radius*	
						180°	90°
0.4 up to 1.5	H111	275 - 350	Min. 125	Min. 12	75	1.0t	1.0t
1.5 up to 3.0	H111	275 - 350	Min. 125	Min. 13	75	1.5t	1.0t
3.0 up to 6.3	H111	275 - 350	Min. 125	Min. 15	75		1.5t
6.3 up to 12.5	H111	275 - 345	Min. 115	Min. 16	75		2.5t
12.5 up to 50.0	H111	275 - 345	Min. 115	-	75		

* Information values only

Physical properties

Density g/cm ³	Solidification range °C	Electrical conductivity %IACS	Thermal conductivity W/m K	Thermal expansion (μm m ⁻¹ K ⁻¹)	Annealing temperature °C	E - modulus (N / mm ²)
2.66	580 - 640	28.5	117	23.8	350 – 400	71,000

Typical Alumeco products with this alloy

- Large selection different of sheet, strip and plates
- Bars and round bars

Properties and information (3 high/good; 2 medium; 1 poor/bad)

<u>Resistance</u> Corrosion index, general: 3 Marine atm. corr. index: 3 <u>Hot workability</u> Extrusion: 2 Forging: 2 <u>Cold formability</u> Cold formability general: 2 Deep drawing: 2 Bending: 2 – 3 Be aware that the formability categorizations depend on the temper of the alloy.	<u>Weldability</u> TIG welding: 3 MIG welding: 3 <u>Solderability</u> 1	<u>Machinability</u> Machinability index: 3 <u>Tips regarding machining</u> Cast material can be machined without internal tensions.	<u>Anodizing</u> Decorative anodizing surface treatment: 1 Protective anodizing index: 3 Hard anodizing: 3 Color anodizing: 2 <u>General information</u> The chemical composition of the alloy is not suitable for decorative anodizing.
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