

ALLOY DATA SHEET

EN-AW 5083[AlMg4.5Mn0.7]

(Type: Medium strength corrosion resistant alloy)

The alloy EN AW-5083 is a medium strength alloy, non heat-treatable alloy with excellent corrosion properties, therefore also suitable for marine applications. The relatively low formability of the alloy limits the complexity of the shapes that can be extruded, although simple hollow shapes are possible. Typical applications are pressure equipment, low temperature applications (cryogenic equipment), welded constructions

Chemical composition according to EN573-3 (weight%, remainder Al)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	remarks	others	
									each	total
max. 0.40	max. 0.40	max. 0.10	0.40 - 1.0	4.0 - 4.9	0.05 - 0.25	max. 0.25	max. 0.15		max. 0.05	max. 0.15

Mechanical properties according to EN755-2

Temper*	Wallthickness e*** [mm]	Yield stress Rp0.2 [MPa]	Tensile strength Rm [MPa]	Elongation		Hardness** HB
				A [%]	A50 [%]	
H		110	270	12	10	

* Temper designation according to EN 515: Properties for information only

** Hardness values are for indication only

Physical properties (approximate values, 20°C)

Density [kg/m ³]	Melting range [°C]	Electrical Conductivity [MS/m]	Thermal Conductivity [W/m.K]	Co-efficient of thermal Expansion 10 ⁻⁶ /K	Modulus of Elasticity [GPa]
2660	575-638	16-19	110-140	24.2	~70

Weldability¹

Gas: 4 TIG: 2 MIG: 2 Resistance
welding: 2 Spot welding: -
Typical filler materials (EN ISO18273): SG-AlMg4.5MnZr

Machining characteristics¹

F temper: 3

Corrosion resistance¹

General: 1 Marine: 1

Coating properties¹

Hard protecting
anodising: 1 Decorative/bright/colour
anodising: 2

¹Relative qualification ranging from 1-very good to 6 unsuitable

