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ALLOY DATA SHEET
EN-AW 6101B[EAlMgSiB]
(Type: High conductivity alloy)

The alloy EN AW-6101B is a medium strength alloy, specifically dedicated to applications where a high electrical conductivity is required. Typical applications are busbars and other electrical conductors and heat sinks.

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

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	remarks	others	
									each	total
0.30-0.6	0.10-0.30	max. 0.05	max. 0.05	0.35-0.6	-	max. 0.10	-		max. 0.03	max. 0.10

Mechanical properties according to EN755-2

Temper*	Wallthickness e [mm]	Yield stress $Rp_{0.2}$ [MPa]	Tensile strength Rm [MPa]	Elongation A [%]	Elongation A_{50} [%]	Hardness** HB
T6	≤ 15	160	215	8	6	65
T7	≤ 15	120	170	12	10	60

*Temper designation according to EN515: T6-Solution heat treated, quenched and artificially aged, T7- Solution heat treated, quenched and artificially overaged to achieve other specific optimum properties than strength. (T6/T7 properties can be achieved by press quenching)
** 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]
2690	585-650	T6: ≥ 30 T7: ≥ 32	218	23.5	~70

Weldability[1]
Gas: 3 TIG: 2 MIG: 2
Typical filler materials (EN ISO18273): SG-AlMg5Cr(A) or AlSi5, and AlMg3 when the product has to be anodised. Due to the heat input during welding the mechanical properties will be reduced by approximately 50% (ref. EN1999-1).

Machining characteristics[1]
T6 temper: 2

Coating properties[1]
Hard protecting anodising: 1
Decorative/bright/colour anodising: 1

Corrosion resistance[1]
General: 1 Marine: 2

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

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