

## ALLOY DATA SHEET

### EN-AW 7108A[AlZn5Mg1Zr(A)]

(Type: High strength structural alloy)

The alloy EN AW-7108A is a high strength weldable extrusion alloy for highly loaded structural applications. The relative low formability of the alloy limits the complexity of the shapes that can be extruded. Typical applications are highly loaded construction parts, such as in transport, elevators, containers and mobile cranes.

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

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	remarks	others	
									each	total
max. 0.20	max. 0.30	max. 0.05	0.05- 0.50	0.7- 1.5	max. 0.04	4.8- 5.8	max. 0.03	Zr 0.08-0.20	max. 0.05	max. 0.15

#### Mechanical properties according to EN755-2

Temper*	Wallthickness e*** [mm]	Yield stress Rp <sub>0.2</sub> [MPa]	Tensile strength Rm [MPa]	Elongation		Hardness** HB
				A [%]	A <sub>50</sub> [%]	
T6	≤ 40	260	310	10	12	
T66	≤ 15	360	400	10	8	
	15 < e ≤ 40	290	350	10	8	125

\*Temper designation according to EN515: T6-Solution heat treated, quenched and artificially aged, T66 cooled from an elevated temperature forming operation and artificially aged to aa condition with higher mechanical properties through special control of manufacturing processes. (T6/T66 properties can be achieved by press quenching)

\*\* Hardness values are for indication only

#### Physical properties (approximate values, 20°C)

Density [kg/m <sup>3</sup> ]	Melting range [°C]	Electrical Conductivity [MS/m]	Thermal Conductivity [W/m.K]	Co-efficient of thermal Expansion 10 <sup>-6</sup> /K	Modulus of Elasticity [GPa]
2770	600-650	19-23	130-160	23.1	~70

#### Weldability<sup>1</sup>

Gas: 3    TIG: 2    MIG: 1    Resistance welding: -    Spot welding: -  
Typical filler materials (EN ISO18273): SG-AlMg5Cr(A) or SG-Al4.5Mn0.7(A) or SG-Al4.5MnZr.

#### Machining characteristics<sup>1</sup>

T4 temper: 3    T6 temper: 2

#### Coating properties<sup>1</sup>

Hard protecting  
anodising: 3    Decorative/bright/colour  
anodising: 4

#### Corrosion resistance<sup>1</sup>

General: 2    Marine: 4

The alloy is however susceptible to stress corrosion cracking

<sup>1</sup>Relative qualification ranging from 1-very good to 6 unsuitable

