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ALLOY DATA SHEET
EN-AW 6005A[AlSiMg(A)]
(Type: Medium strength extrusion alloy)

The alloy EN AW-6005A is a general purpose extrusion alloy, suitable for structural products where medium strength properties are required. Typical application fields are ladders, train- and truckbuilding, marine constructions, off shore applications, etc. Through special control of the chemical composition and the processing parameters, Nedal can achieve specially defined grain structures which are optimised for static and dynamic loading conditions.

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

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	remarks	others	
									each	total
0.50-0.9	max. 0.35	max. 0.30	max. 0.50	0.40-0.7	max. 0.30	max. 0.20	max. 0.10	Mn+Cr 0.12-0.50	max. 0.05	max. 0.15

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
T4	Open profile: ≤ 25 Hollow profile: ≤ 10		90	180	15	13	60
T6	Open profile	≤ 5	225	270	8	6	90
		5 < e ≤ 10	215	260	8	6	85
		10 < e ≤ 25	200	250	8	6	75
	Hollow profile	≤ 5	215	255	8	6	85
		5 < e ≤ 15	200	250	8	6	75

*Temper designation according to EN515: T4-Naturally aged to a stable condition, T5-cooled from an elevated temperature forming operation and artificially aged, T6-Solution heat treated, quenched and artificially aged, (T6 properties can be achieved by press quenching)
** Hardness values are for indication only
***For different wall thicknesses within one profile, the lowest specified properties shall be considered as valid for the whole profile cross section

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]
2700	585-650	26-32	180-220	23.4	~70

Weldability[1]

Gas: 3 TIG: 2 MIG: 2 Resistance welding: 3 Spot welding: 3

Typical filler materials (EN ISO18273): AlMg4.5Mn0.7(A)Cr(A) Due to the heat input during welding the mechanical properties will be reduced by approximately 50% (ref. EN1999-1).

Machining characteristics[1]

T4 temper: 3 T6 temper: 2

Coating properties[1]

Hard protecting anodising: 1 Decorative/bright/colour anodising: 4

Corrosion resistance[1]

General: 1 Marine: 2

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

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