Data Sheet

EN AW 6060 - Profiles
Including anodizing

Alumeco A/S

Internal alloy name:	**6060**
International alloy name:	**EN AW 6060**
Chemical Symbol:	**EN AW – AlMgSi**
DIN-Werkstoff no.:	**3.3206**
Alloy type:	**Heat treatable alloy**

Main usage

- Constructions
- Anodizing in general
- Automotive
- Forgings
- Marine and offshore

Main properties

- Very good atmospheric corrosion resistance
- Very good workability
- Decoration anodized

Important norms and literature

Extrusion:
EN 755-1: Technical conditions for inspection and delivery
EN 755-2: Mechanical properties
EN 755-9: Tolerances on dimensions and forms for different extrusions

Chemical composition:
EN 573-3: Chemical composition

Usages:
EN 13195: Specifications for wrought products for marine applications
EN 602: Usage in the food industry

Anodizing:
ISO 7599 (DIN 17611): Anodizing of aluminium and its alloys

Chemical composition (%) EN 573-3

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Remarks	Other elements Each	Other elements together
0.30-0.60	0.10-0.30	0.10	0.10	0.35-0.60	0.05	0.15	0.10	N/A	0.05	0.15

Typical mechanical properties EN 755 - 2

Product group Dimension (mm)	Temper	Rm MPa	$Rp_{0,2}$ MPa	A %	Hardness* HB
Profiles Wall thickness ≤ 5	T6	Min. 190	Min. 150	8	70
Profiles Wall thickness 5 < t ≤ 25	T6	Min. 170	Min. 140	8	70

* Information values only

Anodizing Classes and layer thicknesses ISO 7599

Class	Minimum average thickness (µm)	Minimum local thickness (µm)
AA5	5,0	4
AA10	10,0	8
AA15	15,0	12
AA20	20,0	16
AA25	25,0	20

Physical properties of metal

Density	Solidification range	Electrical conductivity	Thermal conductivity	Thermal expansion	Annealing temperature	E - modulus
G cm^{-3}	°C	%IACS	W m^{-1} K^{-1}	µm m^{-1} K^{-1}	°C	N mm^{-2}
2.70	645-658	54	209	23.4	350-400	69,500

Typical Alumeco products with this alloy

- Various profiles
- Anodizing pretreatment – E6 – Chemical etched

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

Resistance
Corrosion index, general: 3
Marine atm. corr. index: 3

Hot workability
N/A – Anodizing destroyed.

Cold formability
N/A – Anodizing destroyed.

Weldability
TIG welding: 2
MIG welding: 2
Anodizing needs to be removed before welding

Solderability
2
Anodizing needs to be removed before soldering

Machinability
Machinability index: 1

Tips regarding machining
Bear in mind that the anodizing gives the alloy a very hard surface layer.

Anodizing (Already anodized)
Decorative anodizing surface treatment: 3
Protective anodizing index: 3
Hard anodizing: 3
Color anodizing: 3

General information
The anodized layer and the profiles does not have the same thermal expansion.