**Data Sheet:**

# EN AW 6060 - Profiles

**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 anodisation
- Heat treatable alloys (Soft T4 temper)

**Important norms and literature:**

Extrusion:
EN755-1: Technical conditions for inspection and delivery
EN755-2: Mechanical properties
Series EN755-3 to EN755-9: Tolerances on dimensions and forms for different extrusions

Chemical composition:
EN573-3: Chemical composition

Usages:
EN 13195: Specifications for wrought products for marine applications

EN 602: Usage for food industry

## Chemical composition. EN573-3:2009

| Si | Fe | Cu | Mn | Mg | Cr | Zn | Ti | Remarks | Other elements Each | Other elements together |
|---|---|---|---|---|---|---|---|---|---|---|
| 0,30-0,6 | 0,10-0,30 | 0,10 | 0,10 | 0,35-0,6 | 0,05 | 0,15 | 0,10 | N/A | 0,05 | 0,15 |

## Typical mechanical properties. EN755 - 2

| Product group Dimension (mm) | Temper | Rm MPa | $Rp_{0,2}$ MPa | A % | Hardness* HB |
|---|---|---|---|---|---|
| Rod/Bar ≤ 150 | T4 | Min. 120 | Min. 60 | 16 | 50 |
| Rod/Bar ≤ 150 | T6 | Min. 190 | Min. 150 | 8 | 70 |
| Rod/Bar ≤ 150 | T66 | Min. 215 | Min. 160 | 8 | 75 |
| Tubes Wall thickness ≤ 15 | T6 | Min. 190 | Min. 150 | 8 | 70 |
| Profiles Wall thickness ≤ 25 | T4 | Min. 120 | Min. 60 | 16 | 50 |
| Profiles Wall thickness 3 < t ≤ 25 | T6 | Min. 170 | Min. 140 | 8 | 70 |
| Profiles Wall thickness 3 < t ≤ 25 | T66 | Min. 195 | Min. 150 | 8 | 75 |

* Information values only;

## Physical properties:

| Density g/cm³ | Solidification range °C | Electrical conductivity %IACS | Thermal conductivity W/m K | Thermal expansion (µm m⁻¹ K⁻¹) | Annealing temperature | E - modulus (N / mm²) |
|---|---|---|---|---|---|---|
| 2,70 | 645-658 | 54 | 209 | 23,4 | 300°c | 69.500 |

## Typical Alumeco products with this alloy

- Bars in various dimensions and form
- Angle profiles
- Tubes
- Profiles

## Properties and information's (3 high/good; 2 Middle; 1 Poor/bad)

Resistance:
Corrosion index, general: 3
Marine Atm. Corr index: 3

Hot workability:
Extrusion: 3
Forging: 3

Cold formability:
Cold formability general: 2
Deep drawing: 1
Bending: 2 – 3 (Depending on the temper)

Weldability
TIG welding: 2
MIG welding: 2

Solderability
Brazability index: 2
Solderability index: 2

Machinability
Machinability index: 3

Tips on machinability:

Anodizing:
Decorative anodizing surface treatment: 3
Protective anodizing index: 3
Hard anodizing: 3
Color anodizing: 3

General Information: