Data Sheet

EN AW 5005A – Rolled products

Alumeco A/S

Internal alloy name:	**5005A**
International alloy name:	**EN AW 5005A**
Chemical Symbol:	**EN AW – AlMg1**
DIN-Werkstoff no.:	**3.3535**
Alloy type	**None heat treatable alloy**

Main usage

- Molds
- Machines and machines parts
- Marine applications
- Application for bending
- Facade and building industry
- Can be used in the food industry

Main properties

- High corrosion resistance
- Good weld abilities
- Special anodizing quality can be obtained on request

Important norms and literature

Rolled products:
EN 485-1: Technical conditions for inspection and delivery
EN 485-2: Mechanical properties
EN 485-3: Tolerances on dimensions and form hot rolled products
EN 485-4: Tolerances on dimensions and form cold rolled products

Chemical composition:
EN 573-3: Chemical composition

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

EN 602: Usage in the food industry

Chemical composition (%) EN 573-3

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other elements Each	Other elements together
0.30	0.45	0.05	0.15	0.7-1.1	0.10	0.20	-	0.05	0.15

Typical mechanical properties EN 485-2

Thickness range (mm)	Temper	Rm MPa	$Rp_{0,2}$ MPa	$A_{50\ mm}$ %	Hardness* HB	Bend radius* 180°	Bend radius* 90°
0.5 up to 1.5	H14	145 - 185	Min. 120	Min. 2	48	2.0t	1.0t
1.5 up to 3.0	H14	145 - 185	Min. 120	Min. 3	48	2.5t	1.0t
3.0 up to 6.0	H14	145 - 185	Min. 120	Min. 4	48		2.0t

* 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 °C	E - modulus (N / mm²)
2.70	630 - 655	52	201	23.5	350 – 400	69,000

Typical Alumeco products with this alloy

- sheet and plates (1 – 3 mm thickness)
- Foil coated materials
- Cut to length is possible
- Special anodizing quality plates (AQ)

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

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

Hot workability
Extrusion: 3
Forging: 3

Cold formability
Cold formability general: 3
Deep drawing: 2
Bending: 2 – 3

Be aware that the formability categorizations depend on the temper of the alloy.

Weldability
TIG welding: 3
MIG welding: 3

Solderability
2

Machinability
Machinability index: 1

Anodizing
Decorative anodizing surface treatment: 2**
Protective anodizing index: 3
Hard anodizing: 3
Color anodizing: 2

General information
** A special anodizing quality is available by request.