Data Sheet

EN AW 3003 – Rolled products

Alumeco A/S

Internal alloy name:	**3003**
International alloy name:	**EN AW 3003**
Chemical Symbol:	**EN AW – Al Mn1Cu**
DIN-Werkstoff no.:	**3.0517**
Alloy type:	**Non heat treatable alloy**

Main usage

- Facade panels
- Covers
- Deep-drawn parts
- Pre-painted coils/sheets

Main properties

- Very good atmospheric corrosion resistance
- Very good workability
- Very good weld ability
- Low mechanical properties

Important norms and literature

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

Chemical composition:
EN 573-3: Chemical composition

Chemical composition (%) EN 573-3

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other elements Each	Other elements together
0.6	0.7	0.05 – 0.20	1.0 – 1.5	-	-	0.10	0.05	0.05	0.15

Typical mechanical properties EN 485 - 2

Thickness range (mm)	Temper	Rm MPa	$Rp_{0,2}$ MPa	A_{50} %	Hardness* HB	Bend radius** 180º	Bend radius** 90º
0.5 up to 1.5	**H14**	**145 – 185**	**Min. 125**	**2**	**46**	**2.0t**	**1.0t**
1.5 up to 3.0	**H14**	**145 – 185**	**Min. 125**	**3**	**46**	**2.0t**	**1.0t**
3.0 up to 6.0	**H14**	**145 – 185**	**Min. 125**	**4**	**46**	**-**	**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)
2.73	640 - 655	42	160	23.1	350 - 400	69,500

Typical Alumeco products with this alloy

- **Coils in width of 1000 mm in thicknesses 0,63; 0,75; 0,88; 1,00 mm.**
- **Materials are typically Continuously Cast (CC) materials**

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: 3

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

Weldability
TIG welding: 3
MIG welding: 3

Solderability
3

Machinability
Machinability index: 1

Tips regarding machining
Tools for aluminum processing: High-usable cutting speeds, possibly> 2000 m / min.

Anodizing
Decorative anodizing surface treatment: 3 *(CC cast materials 1)*
Protective anodizing index: 3
Hard anodizing: 3
Color anodizing: 3 *(CC cast materials 1)*

General information
Decorative anodizing cannot be recommended for continuously cast (CC) materials