Data Sheet

EN AW 3003 – Painted coils

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

EN 1396: Coil coated sheet and strip for applications - Specifications

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 1396

Thickness range (mm)	Temper	Rm MPa	$Rp_{0,2}$ MPa	A_{50} %	Hardness* HB	Bend radius** 180º	Bend radius** 90º
0.5 < t < 1.5	H44	140 – 185	Min. 110	4	-	2.0t	1.5t
t > 3.0	H44	140 – 185	Min. 110	5	-	2.0t	1.5t
0.5 < t < 1.5	H45	150 – 205	Min. 130	4	-		
t > 3.0	H45	150 – 205	Min. 130	4	-	-	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

- Painted sheets in standard colors and thicknesses 1,0; 1,5; 1,8 and 2 mm (1000x2000; 1250x2500; 1500x3000)
- Standard polyester wet painted sheets app. 20 my in white, black and grey

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: 2
Deep drawing: 1
Bending: 2

Weldability
TIG welding: 3
MIG welding: 3

The painting needs to be removed before welding.

Solderability
3
The painting needs to be removed before soldering.

Machinability
Machinability index: 1

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

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