Data Sheet

EN AW 1050A – Rolled products
99.50% pure aluminium

Alumeco A/S

Internal alloy name:	**1050A**
International alloy name:	**EN AW 1050A**
Chemical Symbol:	**EN AW - Al 99.5**
DIN-Werkstoff no.:	**3.0255**
Alloy type:	**Non heat treatable alloy**

Main usage

- Constructions
- Cabinets
- Deep-drawn parts
- Strips for heat exchanger
- Light reflectors

Main properties

- Very good atmospheric corrosion resistance
- Very good workability
- High thermal and electrical conductivity (preferred alloy 1350)
- Attractive appearance
- High reflectivity
- Suitable for decorative anodizing*
- Very good weld ability
- Low mechanical properties
- Plates are available in deep drawing quality (DDQ)

*Not for continuously cast (CC) materials

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

Deep-drawn parts:
EN 1669: Earing test for sheet and strip

Usages:
EN 602: Usage in the food industry

Chemical composition (%) EN 573-3

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Remarks	Other elements Each	Other elements together
0.25	0.40	0.05	0.05	0.05	-	0.07	0.05	Min 99.5% Al	0.03	-

Typical mechanical properties EN 485 - 2

Thickness range (mm)	Temper	Rm MPa	$Rp_{0,2}$ MPa	A %	Hardness* HB	Bend radius**	
						180°	90°
0.5 up to 1.5	H111	65 - 95	Min. 20	22	20	0t	0t
1.5 up to 3.0	H111	65 – 95	Min. 20	26	20	0t	0t
0.5 up to 1.5	H14	105 - 145	Min. 85	2	34	1.0t	0.5t
1.5 up to 3.0	H14	105 – 145	Min. 85	4	34	1.0t	1.0t
3.0 up to 6.0	H14	105 – 145	Min. 85	5	34	-	1.5t

** 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	645-658	59.5	210-220	23.5	350-400	69,000

Typical Alumeco products with this alloy

- Sheets in the size of 0.5 – 6 mm in three different sizes (1000x2000; 1250x2500; 1500x3000) and temper H14
- 1 – 3 mm warehouse materials (Continuously Cast)
- Deep-drawn sheets in the size of 1 – 2 mm - Temper H111
- Sheets with stucco pattern
- Strips/Coils

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

Weldability
TIG welding: 3
MIG welding: 3

Cold formability
Cold formability general: 3 (Soft tempers and hot rolled only)
Deep drawing: 3* (Deep drawing quality/DDQ)
Bending: 3 (Soft tempers and hot rolled only)

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 materials 1)*

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

*We stock special produced plates that are especially suited for deep drawing – deep drawing quality (DDQ).