Data Sheet

EN AW 7021 – Cast blocks

Alumeco A/S

Internal alloy name:	**7021**
International alloy name:	**EN AW 7021**
Chemical Symbol:	**EN AW – Al Zn5,5Mg1,5**
DIN-Werkstoff no.:	**N/A**
Alloy type:	**Heat treatable alloy**

Main usage

- Machining
- Machinery
- Forgings
- Tools
- Heavy duty structures
- Hydraulics systems

Main properties

- Very good workability
- Good machinability
- Low tensions

Important norms and literature

Chemical composition:
EN 573-3: Chemical composition

Temper definition:
EN 515: Wrought products - Temper designations

Chemical composition (%) EN 573-3

Si	Fe	Cu	Mn	Mg	Cr	Zn	Zr	Other elements Each	Other elements together
0.25	0.40	0.25	0.10	1.2 – 1.8	0.05	5.0 – 6.0	0.08 – 0.18	0.05	0.15

Typical mechanical properties (Typical values)

Thickness range (mm)	Temper	Rm MPa	$Rp_{0,2}$ MPa	A %	Hardness* HB
All	T79	320 – 380	290 – 340	2.5 – 4.5	110 – 120

* Information values only

Physical properties

Density g/cm³	Specific heat capacity J kg-1 K-1	Electrical conductivity %IACS	Thermal conductivity W/m K	Thermal expansion (µm m^{-1} K^{-1})	Temperature used Max. °C long / short term	E - modulus (N / mm²)
2.80	875	21 – 24	125 - 155	23.0	120 / 140	70,000

Other information

- Blocks sawn 6-sides sawed – Roughness R_a = < 15 µm
- Thickness ≤ 150 mm = -0/+2,5 mm
- Thickness > 150 mm = -0/+5 mm
- Max. Plate dimensions = 1540 x 3048 mm
- Plate thickness = 20 – 570 mm

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

Resistance
Corrosion index, general: 2
Marine atm. corr. index: 2

Hot workability
Extrusion: 2
Forging: 2

Cold formability
Cold formability general: 1
Deep drawing: 1
Bending: 1

Weldability
TIG welding: 2
MIG welding: 2

Solderability
1

Machinability
Machinability index: 3

Tips regarding machining
Cast materials can be machined with a minimum amount of internal tensions.

Anodizing
Decorative anodizing surface treatment: 1
Protective anodizing index: 2
Hard anodizing: 2
Color anodizing: 1