Data Sheet

EN AW 7075 – Rods and bars

Alumeco A/S

Internal alloy name:	**7075**
International alloy name:	**EN AW 7075**
Chemical Symbol:	**EN AW – Al Zn5,5MgCu**
DIN-Werkstoff no.:	**3.4365**
Alloy type:	**Heat treatable alloy**

Main usage

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

Main properties

- Very good workability
- Good machinability
- High strength

Important norms and literature

Extrusion:
EN 755-1: Technical conditions for inspection and delivery
EN 755-2: Mechanical properties
Series EN 755-3 to EN 755-8: Tolerances on dimensions and forms for different extrusions

Chemical composition:
EN 573-3: Chemical composition

Cold drawn:
EN 754-1: Technical conditions for inspection and delivery
EN 754-2: Mechanical properties
Series EN 754-3 to EN 754-8: Tolerances on dimensions and forms for different extrusions

Chemical composition (%) EN 573-3

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Remarks	Other elements Each	Other elements together
0.40	0.50	1.2-2.0	0.30	2.1-2.9	0.18-0.28	5.1-6.1	0.20	Max. 0.25 Zr + Ti	0.05	0.15

Mechanical properties EN 754 – 2 (Drawn bars)

Diameter range (mm)	Temper	Rm MPa	$Rp_{0,2}$ MPa	A %	Hardness* HB
≤ 80	T6	Min. 540	Min. 485	Min. 7	150

Mechanical properties EN 755 – 2 (Extruded bars)

≤ 25	T6	Min. 490	Min. 420	Min. 7	133
25 < D ≤ 100	T6	Min. 470	Min. 400	Min. 7	133
100 < D ≤ 150	T6	Min. 470	Min. 400	Min. 7	133
150 < D ≤ 200	T6	Min. 470	Min. 400	Min. 7	133

Typical mechanical properties. Not defined by standards (Extruded bars)

200 < D ≤ 230	T6	Min. 440	Min. 360	Min. 6	-
230 < D ≤ 300	T6	Min. 420	Min. 320	Min. 6	-
300 < D ≤ 360	T6	Min. 400	Min. 260	Min. 5	-
360 < D ≤ 500	T6	Min. 330	Min. 200	Min. 4	-

* 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)
2.81	475-635	39.5	155	23.5	-	72,000

Typical Alumeco products with this alloy

- Bars in various dimensions and form

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

Resistance
Corrosion index, general: 1
Marine atm. corr. index: 1

Hot workability
Extrusion: 2
Forging: 2

Cold formability
Cold formability general: 1
Deep drawing: 1
Bending: 2

Weldability
TIG welding: 1
MIG welding: 1

Solderability
1

Machinability
Machinability index: 3

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