Datasheet:

EN AW 6101B
Rods, Bars & Profiles - Aluminium

Alumeco ApS
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Internal alloy name:	**6101B**
Chemical Symbol:	**AW-AlMgSi(B)**
International alloy name:	**EN AW-6101B**
UNS:	**A96101**
DIN-Werkstoff no.:	**3.3207**
Alloy type:	**High conductivity alloy**

Main usage:

- Electrical busbar
- Heatsinks/exchangers
- Conductors/connectors

Main properties:

- Relative high conductivity
- Great corrosion resistance
- Good machinability

Important norms and literature:

General Standards:
EN 573-3:2013: Aluminium and aluminium alloys – Chemical composistion and form of wrought products – Part 3: Chemical composition and form of products.

Product standards:
EN 755-2:2016: Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 2: Mechanical properties.

Geometric Tolerance:
EN 755-3: Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 3: Round bars, tolerances on dimensions and form

EN 755-4: Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 4: Square bars, tolerances on dimensions and form

EN 755-9: Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 9: Profiles, tolerances on dimensions and form

Chemical composition in %: EN 573-3:2013

Al	Si	Fe	Cu	Mn	Mg	Zn	Others Max.	
							Each	Total
Remainder	0,30 – 0,6	0,10 – 0,30	Max. 0,05	Max. 0,05	0,35 – 0,6	Max. 0,10	0,03	0,10

Mechanical properties: EN 755-2:2016

Temper	Dimensions Width mm			Tensile Stress R_m MPa	Proof Stress $R_{p0,2}$ MPa	Elongation % Min.		Hardness* HBW
	Diameter	Width across- flats	Wall thickness			A	$A_{50\ mm}$	
T6	-	≤ 15	≤ 15	Min. 215	Min. 160	8	6	70
T7	-	≤ 15	≤ 15	Min. 170	Min. 120	12	10	60

*** 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)
2,69	585 – 650	T6: ≥ 52 T7: ≥ 55	218	23,5	350	70.000

Properties and information's (3 high/good; 2 Middle; 1 Poor/bad)

Resistance:
Corrosion index, general: 3
Marine Atm. Corr index: 2

Hot workability:
Extrusion: 3
Forging: 3

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

Weldability:
TIG welding: 2
MIG welding: 2

Solderability:
Brazability index: 2
Solderability index: 2

Machinability:
Machinability index: 2

Anodizing:
Decorative anodizing surface treatment: 2
Protective anodizing index: 3
Hard anodizing: 3
Color anodizing: 2