

Datasheet: EN AW 6012 Rods, Bars & Profiles - Aluminium Alumeco ApS 16-05-2025					Internal alloy name: 6012 Chemical Symbol: AW-Al MgSiPb International alloy name: EN AW-6012 UNS: A96101 DIN-Werkstoff no.: 3.0615 Alloy type: High conductivity alloy						
Main usage: • Machined construction • Turned parts • Heatsinks/exchangers • Hydraulic valve blocks			Important norms and literature: General Standards: EN 573-3:2013: Aluminium and aluminium alloys – Chemical composition 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								
Main properties: • Relative high conductivity • Good corrosion resistance • Great machinability											
Chemical composition in %: EN 573-3:2013											
Al	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Remarks	Others Max.	
										Each	Total
Remainder	0,6 – 1,4	Max. 0,50	Max. 0,10	0,4 – 1,0	0,6 – 1,2	Max. 0,10	Max. 0,30	Max. 0,20	0,7 Bi; 0,40 – 2,0 Pb	0,05	0,15
Mechanical properties: EN 755-2:2016											
Temper	Dimensions 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, T6510, T6511	≤ 150	≤ 150	≤ 30	Min. 310	Min. 260	8	6	105			
	150 < D ≤ 200	150 < S ≤ 200	-	Min. 260	Min. 200	8	-	105			
* Information values only;											
Physical properties:											
Density	Solidification range	Electrical conductivity	Thermal conductivity	Thermal expansion	Annealing temperature	E - modulus					
g/cm ³	°C	%IACS	W/m K	(μm m ⁻¹ K ⁻¹)	°C	(N / mm ²)					
2,75	585 – 650	41 – 55	200	23,4	380	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: 2 Forging: - Cold formability: Cold formability general: 2 Deep drawing: 1 Bending: 2				Weldability: TIG welding: 1 MIG welding: 1 Solderability: Brazability index: 1 Solderability index: 1 Machinability: Machinability index: 2				Anodizing: Decorative anodizing surface treatment: - Protective anodizing index: 2 Hard anodizing: 2 Color anodizing: 2			