

Data Sheet						Internal alloy name: 6082			
EN AW 6082 – Tubes and open profiles						International alloy name: EN AW 6082			
						Chemical Symbol: EN AW – AlSi1MgMn			
Alumeco A/S						DIN-Werkstoff no.: 3.2315			
						Alloy type: Heat treatable alloy			
Main usage		Main properties				Important norms and literature			
• Machining • Machinery • Heavy duty structures • Marine and offshore		• Very good atmospheric corrosion resistance • Very good workability • Good machinability • Heat treatable alloys (Soft T4 temper)				Extrusion: EN 755-1: Technical conditions for inspection and delivery EN 755-2: Mechanical properties EN 755-8: Tolerances for extruded tubes EN 755-9: Tolerances on dimensions and forms for different extrusions Chemical composition: EN 573-3: Chemical composition Usages: EN 13195: Specifications for wrought products for marine applications EN 602: Chemical composition of semi-finished products for the used for the fabrication of articles for use in contact with foodstuff			
Chemical composition EN 573-3:2009									
Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other elements	
								Each	together
0.7-1.3	0.5	0.1	0.4-1.0	0.6-1.2	0.25	0.2	0.1	0.05	0.15
Typical mechanical properties EN 755 – 2 (Extruded profiles)									
Product Group Thickness Dimension (mm)		Temper		Rm MPa		Rp0.2 MPa		A %	Hardness* HB
Tubes ≤ 25		O, H111		Max. 160		Max. 110		14	35
Tubes ≤ 25		T4		Min. 205		Min. 110		14	70
Tubes ≤ 5		T6		Min. 290		Min. 250		8	95
Tubes 5 < t ≤ 25		T6		Min. 310		Min. 260		10	95
Open profiles ≤ 25		T4		Min. 205		Min. 110		14	70
Open profiles ≤ 5		T6		Min. 290		Min. 250		8	95
Open profiles 5 < t ≤ 25		T6		Min. 310		Min. 260		10	95
* 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	575-650		44	172		23.1		350-400	70,000
Typical Alumeco products with this alloy									
• Profiles in various dimensions and form									
Properties and information (3 high/good; 2 medium; 1 poor/bad)									
<u>Resistance</u> Corrosion index, general: 3 Marine atm. corr. index: 3 <u>Hot workability</u> Extrusion: 3 Forging: 3 <u>Cold formability</u> Cold formability general: 2 Deep drawing: 1 Bending: 2 – 3 (Depending on the temper)			<u>Weldability</u> TIG welding: 2 MIG welding: 2 <u>Solderability</u> 1		<u>Machinability</u> Machinability index: 3		<u>Anodizing:</u> Decorative anodizing surface treatment: 2 Protective anodizing index: 3 Hard anodizing: 3 Color anodizing: 2 <u>General information</u> Decorative anodizing can be a challenge due to crystal growth in the material.		