

Data Sheet		Internal alloy name: 6082							
<b>EN AW 6082 – Tubes and open profiles</b>  Alumeco A/S		International alloy name: EN AW 6082 Chemical Symbol: EN AW – AlSi1MgMn							
		DIN-Werkstoff no.: 3.2315 Alloy type: Heat treatable alloy							
<b>Main usage</b> <ul style="list-style-type: none"> <li>Machining</li> <li>Machinery</li> <li>Heavy duty structures</li> <li>Marine and offshore</li> </ul>		<b>Main properties</b> <ul style="list-style-type: none"> <li>Very good atmospheric corrosion resistance</li> <li>Very good workability</li> <li>Good machinability</li> <li>Heat treatable alloys (Soft T4 temper)</li> </ul>			<b>Important norms and literature</b> 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  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: Chemical composition				
<b>Chemical composition EN 573-3:2009</b>									
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
<b>Typical mechanical properties EN 755 – 2 (Extruded profiles)</b>									
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
<small>* Information values only</small>									
<b>Physical properties</b>									
Density g/cm <sup>3</sup>	Solidification range °C	Electrical conductivity %IACS	Thermal conductivity W/m K	Thermal expansion (µm m <sup>-1</sup> K <sup>-1</sup> )	Annealing temperature °C	E - modulus (N / mm <sup>2</sup> )			
2.70	575-650	44	172	23.1	350-400	70,000			
<b>Typical Alumeco products with this alloy</b> <ul style="list-style-type: none"> <li>Profiles in various dimensions and form</li> </ul>									
<b>Properties and information (3 high/good; 2 medium; 1 poor/bad)</b>									
<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.		