

<b>Data Sheet</b>  <b>EN AW 6082 – Rolled products</b>  <b>Alumeco A/S</b>		<b>Internal alloy name:</b> 6082  <b>International alloy name:</b> EN AW 6082 <b>Chemical Symbol:</b> EN AW – AlSi1MgMn  <b>DIN-Werkstoff no.:</b> 3.2315 <b>Alloy type:</b> Heat treatable alloy
<b>Main usage</b>  <ul style="list-style-type: none"> <li>• Machining</li> <li>• Machinery</li> <li>• Forgings</li> <li>• Tools</li> <li>• Heavy duty structures</li> <li>• Hydraulics systems</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>  <b>Rolled products:</b> EN 485-1: Technical conditions for inspection and delivery EN 485-2: Mechanical properties EN 485-3: Tolerances on dimensions and form hot rolled products EN 485-4: Tolerances on dimensions and form cold rolled products  <b>Usages:</b> EN 13195: Specifications for wrought products for marine applications EN 602: Usage in the food industry  <b>Chemical composition:</b> EN 573-3: Chemical composition

Chemical composition (%) EN 573-3									
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 485 – 2							
Thickness range (mm)	Temper	Rm MPa	Rp <sub>0.2</sub> MPa	A %	Hardness* HB	Bend radius*	
						180°	90°
1.5 up to 3.0	T6	Min. 310	Min. 260	7	94		3.5t
3.0 up to 6.0	T6	Min. 310	Min. 260	10	94		4.5t
6.0 up to 12.5	T6	Min. 300	Min. 255	9	91		6.0t
12.5 up to 60.0	T6	Min. 295	Min. 240	8	89		-
60.0 up to 100.0	T6	Min. 295	Min. 240	7	89		-
100.0 up to 150.0	T6	Min. 275	Min. 240	6	84		-
150.0 up to 175.0	T6	Min. 275	Min. 230	4	83		
175.0 up to 350.0	T6	Min. 260	Min. 220	2	-		

\* Information values only

Physical properties						
Density g/cm <sup>3</sup>	Solidification range °C	Electrical conductivity %IACS	Thermal conductivity W/m K	Thermal expansion ( $\mu\text{m m}^{-1} \text{K}^{-1}$ )	Annealing temperature °C	E - modulus (N / mm <sup>2</sup> )
2.70	575-650	44	172	23.1	350-400	70,000

Typical Alumeco products with this alloy
<ul style="list-style-type: none"> <li>• Bars in various dimensions and form</li> <li>• Profiles</li> <li>• Large selection different of sheet, strip and plates</li> </ul>

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.