

Data Sheet EN AW 6082 – Rods and bars Alumeco A/S				Internal alloy name: 6082 International alloy name: EN AW 6082 Chemical Symbol: EN AW – AlSi1MgMn DIN-Werkstoff no.: 3.2315 Alloy type: Heat treatable alloy																																																			
Main usage • Machining • Machinery • Heavy duty structures • Marine and offshore		Main properties • Very good atmospheric corrosion resistance • Very good workability • Good machinability • Heat treatable alloys (Soft T4 temper) • A special anodizing quality is available by request		Important norms and literature Extrusion: EN 755-1: Technical conditions for inspection and delivery EN 755-2: Mechanical properties EN 755-9: Tolerances on dimensions and forms for different extrusions Usages: EN 13195: Specifications for wrought products for marine applications EN 602: Usage in the food industry Chemical composition: EN 573-3: Chemical composition																																																			
Chemical composition EN 573-3:2009 <table><tr><td>Si</td><td>Fe</td><td>Cu</td><td>Mn</td><td>Mg</td><td>Cr</td><td>Zn</td><td>Ti</td><td colspan="2">Other elements</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Each</td><td>together</td></tr><tr><td>0.7-1.3</td><td>0.5</td><td>0.1</td><td>0.4-1.0</td><td>0.6-1.2</td><td>0.25</td><td>0.2</td><td>0.1</td><td>0.05</td><td>0.15</td></tr></table>								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																		
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Typical mechanical properties EN 755 – 2 (Extruded profiles) <table><tr><td>Product group</td><td>Temper</td><td>Rm</td><td>Rp0,2</td><td>A</td><td>Hardness*</td></tr><tr><td>Dimension (mm)</td><td></td><td>MPa</td><td>MPa</td><td>%</td><td>HB</td></tr><tr><td>Rod/bar ≤ 200</td><td>O, H111</td><td>Max. 160</td><td>Max. 110</td><td>14</td><td>35</td></tr><tr><td>Rod/bar ≤ 200</td><td>T4</td><td>Min. 205</td><td>Min. 110</td><td>14</td><td>70</td></tr><tr><td>Rod/bar ≤ 20</td><td>T6</td><td>Min. 295</td><td>Min. 250</td><td>8</td><td>95</td></tr><tr><td>Rod/bar 20 <D ≤ 150</td><td>T6</td><td>Min. 310</td><td>Min. 260</td><td>8</td><td>95</td></tr><tr><td>Rod/bar 150 <D ≤ 200</td><td>T6</td><td>Min. 280</td><td>Min. 240</td><td>6</td><td>95</td></tr><tr><td>Rod/bar 200 <D ≤ 250</td><td>T6</td><td>Min. 270</td><td>Min. 200</td><td>6</td><td>95</td></tr></table>								Product group	Temper	Rm	Rp0,2	A	Hardness*	Dimension (mm)		MPa	MPa	%	HB	Rod/bar ≤ 200	O, H111	Max. 160	Max. 110	14	35	Rod/bar ≤ 200	T4	Min. 205	Min. 110	14	70	Rod/bar ≤ 20	T6	Min. 295	Min. 250	8	95	Rod/bar 20 <D ≤ 150	T6	Min. 310	Min. 260	8	95	Rod/bar 150 <D ≤ 200	T6	Min. 280	Min. 240	6	95	Rod/bar 200 <D ≤ 250	T6	Min. 270	Min. 200	6	95
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Typical Alumeco products with this alloy • Profiles in various dimensions and form																																																							
Properties and information (3 high/good; 2 medium; 1 poor/bad) <table><tr><td> <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) </td><td> <u>Weldability</u> TIG welding: 2 MIG welding: 2 <u>Solderability</u> 1 </td><td> <u>Machinability</u> Machinability index: 3 </td><td> <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. A special anodizing quality is available by request. </td></tr></table>								<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. A special anodizing quality is available by request.																																												
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