**BÖHLER S-Al Mg 4.5 Mn**

**Solid wire, Aluminium**

### Classifications

<table>
<thead>
<tr>
<th>EN ISO 18273</th>
<th>AWS A5.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Al 5183 (AlMg4.5Mn0.7(A))</td>
<td>ER5183</td>
</tr>
</tbody>
</table>

### Characteristics and typical fields of application

Sold wire for welding of AlMg alloys. The weld metal is resistant against sea water. Base material should be cleaned near the seam. Pre-heating 150 °C for plates > 15 mm

### Base materials

<table>
<thead>
<tr>
<th>Material</th>
<th>Composition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlMg 4.5 Mn</td>
<td>3.3547</td>
<td>EN AW-5083 [AlMg 4.5 Mn 0.7]</td>
</tr>
<tr>
<td>AlMg 4 Mn</td>
<td>3.3545</td>
<td>EN AW-5086 [AlMg 4]</td>
</tr>
<tr>
<td>AlMg 5</td>
<td>3.3555</td>
<td>EN AW-5019 [AlMg 5]</td>
</tr>
<tr>
<td>AlMgSi 0.5</td>
<td>3.3206</td>
<td>EN AW-6060 [AlMgSi]</td>
</tr>
<tr>
<td>AlMgSi 0.7</td>
<td>3.3210</td>
<td>EN AW-6005A [AlSiMg(A)]</td>
</tr>
<tr>
<td>AlMgSi 1</td>
<td>3.2315</td>
<td>EN AW-6082 [AlSi 1 MgMn]</td>
</tr>
<tr>
<td>AlMg 1 SiCu</td>
<td>3.3211</td>
<td>EN AW-6061 [AlMg 1 SiCu]</td>
</tr>
<tr>
<td>AlZn 4.5 Mg</td>
<td>3.4335</td>
<td>EN AW-7020 [AlZn 4.5 Mg 1]</td>
</tr>
<tr>
<td>G-AlMg 5</td>
<td>3.3561</td>
<td>EN AC-51300</td>
</tr>
<tr>
<td>G-AlMg 5 Si</td>
<td>3.3261</td>
<td>EN AC-51400</td>
</tr>
</tbody>
</table>

### Typical analysis of solid wire (wt.-%)

<table>
<thead>
<tr>
<th>Element</th>
<th>wt.-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al</td>
<td>bal.</td>
</tr>
<tr>
<td>Mn</td>
<td>0.5 – 1.0</td>
</tr>
<tr>
<td>Cr</td>
<td>0.05 – 0.25</td>
</tr>
<tr>
<td>Mg</td>
<td>4.3 – 5.2</td>
</tr>
<tr>
<td>Ti</td>
<td>&lt;0.15</td>
</tr>
</tbody>
</table>

### Mechanical properties of all-weld metal

<table>
<thead>
<tr>
<th>Condition</th>
<th>Yield strength R_p0.2 MPa</th>
<th>Tensile strength R_m MPa</th>
<th>Elongation A (L_0=5d_0) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>u</td>
<td>≥ 130</td>
<td>≥ 275</td>
<td>≥ 18</td>
</tr>
<tr>
<td>uuntreated, as welded</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Operating data

- **Polarity:** DC (+)
- **Shielding gases:** (EN ISO 14175)
  - I1, I3
- Base material should be cleaned near the seam. Pre-heating 150 °C for plates > 15 mm

### Approvals

TÜV (02319.), DB (61.014.05), CE

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All information provided is based upon careful investigation and intensive research. However, we do not assume any liability for correctness and information is subject to change without notice.

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www.voestalpine.com/welding