Overview & application

- Medium mechanical properties, but high corrosion resistance
- No contents of lead, tin and bismuth (ELV, RoHS & REACH compatible)
- Excellent weldability, good anodizing and medium fatigue strength
- Good cold formability in T4 temper
- Applied in heavy duty structures in automotive & transport, aerospace & defense
- Fully RoHS compliant with Pb ≤ 0,1% (EU regulation 2018/740/EU as of May 2021)

Chemical composition (Weight %)

<table>
<thead>
<tr>
<th></th>
<th>Si</th>
<th>Fe</th>
<th>Cu</th>
<th>Mn</th>
<th>Mg</th>
<th>Cr</th>
<th>Zn</th>
<th>Ti</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>0.40</td>
<td>-</td>
<td>0.15</td>
<td>-</td>
<td>0.8</td>
<td>0.04</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max.</td>
<td>0.8</td>
<td>0.7</td>
<td>0.40</td>
<td>0.15</td>
<td>1.2</td>
<td>0.35</td>
<td>0.25</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Remarks: Others: each: 0,05 / total: 0,15

Typical tempers

- T4, T6

Mechanical properties

<table>
<thead>
<tr>
<th>Product (Temper)</th>
<th>Dimension (mm)</th>
<th>Rm (MPa)</th>
<th>Rp 0.2 (MPa)</th>
<th>A (%)</th>
<th>HBW (2,5/62,5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extruded bars (T4)</td>
<td>D≥125</td>
<td>180</td>
<td>110</td>
<td>15</td>
<td>65</td>
</tr>
<tr>
<td>Extruded bars (T6)</td>
<td>D≥125</td>
<td>260</td>
<td>240</td>
<td>8</td>
<td>95</td>
</tr>
<tr>
<td>Cold drawn bars (T4)</td>
<td>D≥80</td>
<td>205</td>
<td>110</td>
<td>14</td>
<td>65</td>
</tr>
<tr>
<td>Cold drawn bars (T6)</td>
<td>D≥80</td>
<td>290</td>
<td>240</td>
<td>8</td>
<td>95</td>
</tr>
</tbody>
</table>

Processing properties

- Machinability
- Machining index (chips #/100g) 2000
- MIG-TIG weldability

Protective anodising

- Hard anodising

Corrosion

- Corrosion resistance @ sea water
- Corrosion resistance @ atmosphere
- Corrosion depth ISO 11846B (µm) 200-450

Physical properties

- Density: 2.70 g/cm³
- Young’s modulus of elasticity: 70000 MPa
- Coeff. of thermal expansion (20-100°C): 23 x10^-6/°C
- Thermal conductivity at 20°C: 170-200 W/m*K
- Specific heat capacity: 897 J/kg*K
- Electrical conductivity at 20°C: 22-30 MS/m