Material available

**Thickness:** Sheets 1-6 mm, Plates 8-150 mm
**Dimension:** 1020 x 2020 mm, 1270 x 2520 mm, 1520 x 3020 mm, or as requested.

### Main Usage
- forming
- forging
- Mechanical Engineering
- Tools

### Main Properties
- Solid basic material
- Good machinability
- Good corrosion resistance
- High tension, also at thick plates high tension

### Important norms and literature:
- DIN 1725 T.1: Aluminum alloys, forgeable alloys
- DIN 1745 T.1: Coils and sheets of forgeable alloys >0,35mm Thickness
- DIN 1745 T.1: technical details
- DIN 1783: cold rolled / dimensional specification
- DIN 59600 hot rolled / dimensional specification
- Further Standards: ASTM; AMS; QQ-A-250

### Chemical composition. EN573-3:2013

<table>
<thead>
<tr>
<th>Si</th>
<th>Fe</th>
<th>Cu</th>
<th>Mn</th>
<th>Mg</th>
<th>Cr</th>
<th>Zn</th>
<th>Ti</th>
<th>Other elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,20-0,8</td>
<td>0,7</td>
<td>3,5-4,5</td>
<td>0,4-1,0</td>
<td>0,4-1,0</td>
<td>0,10</td>
<td>0,25</td>
<td>-</td>
<td>0,05 (each)</td>
</tr>
</tbody>
</table>

### Typical mechanical properties. EN485 - 2

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Temper</th>
<th>Rm MPa</th>
<th>Rp 0,2 MPa</th>
<th>A 50 mm %</th>
<th>Hardness HB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coils mm</td>
<td>Sheets mm</td>
<td>Acron</td>
<td>Number</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>0,35-3,0</td>
<td>0,35-12</td>
<td>W</td>
<td>3.1325.10</td>
<td>soft</td>
<td>max. 215</td>
</tr>
<tr>
<td>0,35-3,0</td>
<td>0,35-3,0</td>
<td>F40</td>
<td>3.1325.51</td>
<td>cold hardened</td>
<td>395</td>
</tr>
<tr>
<td>3,0-12</td>
<td>F39</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>390</td>
</tr>
<tr>
<td>12-60</td>
<td>F39</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>385</td>
</tr>
</tbody>
</table>

### Physical properties:

<table>
<thead>
<tr>
<th>Density g/cm³</th>
<th>Solidification range °C</th>
<th>Electrical conductivity %IACS</th>
<th>Thermal conductivity W/m K</th>
<th>Thermal expansion (µm m⁻¹ K⁻¹)</th>
<th>E - modulus (N / mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,80</td>
<td>512-650</td>
<td>18-28</td>
<td>130-200</td>
<td>23,8</td>
<td>-70.000</td>
</tr>
</tbody>
</table>

### Properties and details (Rating in decreasing tendency. 1= very good; 5= bad; na= not applicable; ns= not suitable)

**Durability**
- Seawater: 5
- Weather conditions: 4
- Hot forming property
- Bar extrusion: 4
- Die forging: 3
- Hammer forging: 3

**Cold formability**
- Upsetting, stakeing, flushing (Temper Soft): 3
- Deep drawing (Temper Soft): 3
- Bending (Temper Soft): 2
- Pressure forming (Temper Soft): 3
- Impact extruding Temper Soft: 3

**Weldability**
- Gas-fusion welding: ns
- WIG-Welding: ns
- MIG- Welding: ns
- Resistance spot welding: 1
- Flash butt welding: 2

**Brazability**
- Brazing with/ without melter: ns
- Soldering, abrasion soldering: 3
- Soldering with melter: ns

**Machinability**
- Temper soft anneal: 4
cured: 2

**Remarks to the machinability**
- Tools for the machining of Aluminum: Usable cutting velocities high, preferably >2000 m/min
- Tension, deformation is possible. So stress equalization only 24h period of storage before last machining

**Surface treatment**
- Decorative Anodizing: ns
- Protective anodization: 2
- Painting, lamination: 3
- Electroplated coating: 2
- Chemical nickel coating: 2

**General Tips**
- gradient solidity and hardness in the core of thick plates, as the case may be please use special material HOKOTOL.
- If material is thicker than 250mm please use nature hard alloys like 5083.
- Only use it stretched or bulged.