Chemical Composition Limits (in %)

<table>
<thead>
<tr>
<th>Cu</th>
<th>Mg</th>
<th>Si</th>
<th>Fe</th>
<th>Mn</th>
<th>Zn</th>
<th>Ti</th>
<th>Cr</th>
<th>Other elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,1</td>
<td>4,0</td>
<td>0,4</td>
<td>0,4</td>
<td>0,4</td>
<td>0,25</td>
<td>0,15</td>
<td>0,05</td>
<td>0,05</td>
</tr>
<tr>
<td>4,9</td>
<td></td>
<td></td>
<td></td>
<td>1,0</td>
<td></td>
<td></td>
<td></td>
<td>0,15</td>
</tr>
</tbody>
</table>

Outstanding Characteristics:

High strength after welding.
Very resistant to sea water and industrial atmosphere.

Standard Commodities:

Plate; sheet; extrusions.

Typical Uses:

Shipbuilding; car bodies, railway wagons.
Recommended for pressure vessels and low temperature applications. Structural plate for mine skips and cages. Tipper and dumper bodies.

Typical Physical Properties

- Density: 2,65 g/cm³
- Modulus of Elasticity: 72 GPa
- Modulus of Rigidity: 27 GPa
- Melting Range: 570-640 °C
- Specific heat between 10-100°C: 0,97
- Coefficient of linear expansion between 20-200°C (293-473K): 25 x 10⁻⁶/K
- Thermal Conductivity at 25°C (293 K): 121-126 W/mK
- Resistivity at 20°C (293 K): 0,058 x 10⁻⁶ Ωm

Other Characteristics

- Corrosion Resistance: Excellent
- Weldability: Good
- Formability: Good (in 0 temper)
- Machinability: Fair
- Anodising: Good (natural only)
- Brazeability: Not recommended

Mechanical Properties

<table>
<thead>
<tr>
<th>Commodity and Temper</th>
<th>Gauge and</th>
<th>0,2% Proof Stress (MPa)</th>
<th>Ultimate Tensile Strength (MPa)</th>
<th>Elongation A5 %</th>
<th>Brinell Hardness HB</th>
<th>Ultimate Shear Strength (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>3,0 -100,0</td>
<td>125 (-) 380</td>
<td>275 (-) 450</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>0,7 - 80,0</td>
<td>125 (-) 200</td>
<td>275 (-) 350</td>
<td>16*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H22</td>
<td>0,2 - 6,6</td>
<td>235 (-) 345</td>
<td>310 (-) 375</td>
<td>8-10*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H24</td>
<td>0,6 - 6,0</td>
<td>270 (-) 380</td>
<td>345 (-) 405</td>
<td>6-8*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 50 mm gauge length; sheet - thickness over 1,3 mm

Annealing

- Temperature °C: 350 ± 3
- Time h: 2-3 (to soften permanently)