**Alloy Ergste® 1.4306LA**

**Technical Information**

Zapp is certified to ISO 9001

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**Ergste® 1.4306La**

**Categorization**

Austenitic stainless Chromium-Nickel-Steel

DIN EN 10088-2: 1.4306, X2CrNi 19-11  
ASTM /AISI: Type 304L (USA)  
JIS G4305: SUS 304L (Japan)

**Surfaces and tensile strength**

Possible conditions for delivery are:  
Solution annealed (soft) procedure 2R, or work hardened (hard) in accordance to DIN EN 10151 procedure 2H with tensile strength up to maximum 1300 MPa.

**Dimension**

Thickness: 0.035 to 2.0 mm  
Width: 3 to 420 mm  
Tolerances are acc. to DIN EN 9445 P  
Closer tolerances on request.

**Edges**

- mill edges  
- slit  
- deburred  
- rounded

**Form of delivery**

- coils  
- multicoils  
- spools  
- bars

**Typical applications**

**In soft condition:**  
- Stamping and Bending Parts, Deep Drawing Parts  
- Pre material for Welded Tubes

**In hard condition:**  
- Deep Drawing Parts  
- Flat Springs  
- Membranes

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**Approximate chemical analysis (%)**

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.02</td>
<td>0.4</td>
<td>1.3</td>
<td>0.025</td>
<td>0.003</td>
<td>18.1</td>
<td>10.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Typical mechanical values at room temperature**

<table>
<thead>
<tr>
<th></th>
<th>Soft</th>
<th>Hard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength Rm [MPa]</td>
<td>580-680</td>
<td>1250</td>
</tr>
<tr>
<td>0.2 % Yield point Rp0.2 [MPa]</td>
<td>225-280</td>
<td>1150</td>
</tr>
<tr>
<td>Elongation A80 [%]</td>
<td>&gt; 35</td>
<td>1</td>
</tr>
</tbody>
</table>

* typical values, intermediate values possible

**Physical properties at room temperature**

<table>
<thead>
<tr>
<th>Physical properties at 20 °C</th>
<th>Physical properties at 20 – 400 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density ρ</td>
<td>7.9 [kg/dm³]</td>
</tr>
<tr>
<td>Elastic-Modulus</td>
<td>200 [GPa]</td>
</tr>
<tr>
<td>Thermal conductivity λ</td>
<td>15 [W/m - K]</td>
</tr>
<tr>
<td>Specific heat c_p</td>
<td>500 [J/kg - K]</td>
</tr>
<tr>
<td>Specific electrical resistance ρ</td>
<td>0.73 [Ω - mm²/m]</td>
</tr>
<tr>
<td>Thermal expansion Φ</td>
<td>20 – 100 °C 16.0 x 10⁻⁶ - K⁻¹</td>
</tr>
<tr>
<td></td>
<td>20 – 400 °C 18.0 x 10⁻⁶ - K⁻¹</td>
</tr>
</tbody>
</table>

**Technical properties**

Ergste® 1.4306LA is a corrosion resistant steel with good formability in soft condition. The work hardening is greater than the ferritic stainless steels and less than the austenitic Chromium-Nickel-Steel 1.4301.

Ergste® 1.4306LA is weldable and resistant against intercristalline corrosion in accordance to DIN EN ISO 3651 (Strauss test). For machining high quality tooling is required, like for all stainless steels. Polishing is possible. Ergste® 1.4306LA in annealed condition shows no magnetism and becomes slightly magnetic when is cold formed.
Further information regarding our products and locations are available in our image brochure and under www.zapp.com.

The illustrations, drawings, dimensional and weight data and other information included in this data sheet are intended only for the purposes of describing our products and represent non-binding average values. They do not constitute quality data, nor can they be used as the basis for any guarantee of quality or durability. The applications presented serve only as illustrations and can be construed neither as quality data nor as a guarantee in relation to the suitability of the material. This cannot substitute for comprehensive consultation on the selection of our products and on their use in a specific application. The brochure is not subject to change control.

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