CZ106 (CW505L) Technical Datasheet

Brass Alloy

Applications
- Heat exchanger tubes
- Chemical processing components
- Industrial pressings
- Deep drawn and spun components
- Chains and fastenings
- Fire extinguishers

Alloy Attributes
- Good corrosion resistance
- Optimum combination of strength & ductility for alpha brasses
- Excellent deep drawing characteristics
- Superb cold forming properties

Related Material Specifications
CZ106 / CW505L correspond to the following designation but may not be a direct equivalent: CuZ30

Product Description
Often referred to as a cartridge brass, CW505L / CZ106 brass alloy is an alpha brass with less than 37% zinc which is a ductile alloy that can be cold worked. Coupled with high corrosion characteristics and high tensile strength, this free machining brass includes a number of small alloying elements to provide advantageous properties. With an excellent combination of strength and ductility this grade of material is used for its excellent cold workability and superior deep drawing properties.

Cold Working
Excellent - the alloy is used in extreme deep drawing and cold working applications.

Weldability
- Soldering: Very Good
- Brazing: Very Good
- Oxy-acetylene welding: Not Recommended
- Gas-shielded arc welding: Not Recommended
- Resistance welding: Spot & Seam Butt: Not Recommended
- Butt: Fair

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th>Weight (%)</th>
<th>Cu</th>
<th>Ni</th>
<th>Sn</th>
<th>Pb</th>
<th>Al</th>
<th>Zn</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>min.</td>
<td>69.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>max.</td>
<td>71.0</td>
<td>0.30</td>
<td>0.10</td>
<td>0.05</td>
<td>0.02</td>
<td>Balance</td>
<td>0.10</td>
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</tbody>
</table>

Mechanical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proof Stress 90 MPa</td>
<td>90 MPa</td>
<td>430 MPa</td>
</tr>
<tr>
<td>Tensile Strength 270 MPa</td>
<td>270 MPa</td>
<td>480 MPa</td>
</tr>
<tr>
<td>Elongation v5.65 15%</td>
<td>15%</td>
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<tr>
<td>Hardness Vickers 55 HV</td>
<td>55 HV</td>
<td>155HV</td>
</tr>
</tbody>
</table>

Corrosion Resistance
Good

Availability
Sheet

Technical Assistance
Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

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Technical Datasheet

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