SigmaBronze 12

PHOSPHOR BRONZE ALLOY

PRODUCT DESCRIPTION

SigmaBronze 12 is an attractive alternative to PB1 or PB2 in a variety of applications as it is available in metric sizes and has the advantage of higher tin content which offers a degree of self-lubrication. The alloy offers a combination of good corrosion resistance, ductility and wear resistance with high mechanical strength. SigmaBronze 12 is a continuously cast copper-based alloy known as a phosphor bronze.

KEY FEATURES

- High wear resistance
- Available in metric sizes
- High tin content promotes self-lubrication
- High fatigue strength and mechanical strength
- Good machinability

APPLICATIONS

- Marine ultrasonics, excavators and cranes
- Hydraulics, liner bearings, bushes & bearings
- Worms and gears under high working loads

AVAILABILITY

Bar, tube & flat bar

MATERIAL SPECIFICATIONS

SigmaBronze 12 | BS1400 PB1 | BS1400 PB2

MACHINABILITY

Good

CHEMICAL COMPOSITION (weight %)

<table>
<thead>
<tr>
<th></th>
<th>Cu</th>
<th>Al</th>
<th>Fe</th>
<th>Ni</th>
<th>Mn</th>
<th>P</th>
<th>Pb</th>
<th>Si</th>
<th>Sn</th>
<th>Zn</th>
<th>S</th>
<th>Sb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>85.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>89.00</td>
<td>0.01</td>
<td>0.20</td>
<td>2.00</td>
<td>0.20</td>
<td>0.60</td>
<td>0.70</td>
<td>0.01</td>
<td>13.00</td>
<td>0.50</td>
<td>0.05</td>
<td>0.15</td>
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MECHANICAL PROPERTIES (actual properties according to specification chosen)

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<tbody>
<tr>
<td>Hardness Brinell</td>
<td>min. 90</td>
</tr>
<tr>
<td>Tensile Strength (N/mm²)</td>
<td>min. 300</td>
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<tr>
<td>Yield Point (N/mm²)</td>
<td>min. 150</td>
</tr>
<tr>
<td>Elongation at break (%)</td>
<td>min. 6</td>
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