**STANDARD REFERENCE:**
EN 10025-2: 2004 (Hot-rolled products) | EN 10277: 2018 (Bright products)

**RODACCI AI REFERENCES AND COMPARABLE STANDARDS**

<table>
<thead>
<tr>
<th>Grade</th>
<th>N°</th>
<th>Werkstoff</th>
<th>N°</th>
</tr>
</thead>
<tbody>
<tr>
<td>S235JR</td>
<td>1.0038</td>
<td>Fe 360 B</td>
<td>1.0038</td>
</tr>
<tr>
<td>S235JRC</td>
<td>1.0122</td>
<td>RSt 37 - 2</td>
<td>E 24 - 2</td>
</tr>
</tbody>
</table>

**CHEMICAL COMPOSITION (CAST ANALYSIS) (%)**

<table>
<thead>
<tr>
<th>C / max</th>
<th>Mn / max</th>
<th>P / max*</th>
<th>S / max</th>
<th>N / max*</th>
<th>Cu / max</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,19</td>
<td>1,50</td>
<td>0,045</td>
<td>0,045</td>
<td>0,014</td>
<td>0,60</td>
</tr>
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</table>

* for each reduction of 0,005% below the specified P maximum an increase of 0,001% N above specified maximum will be permitted up to a maximum of 0,012%

**MECHANICAL PROPERTIES - AS ROLLED CONDITION**

<table>
<thead>
<tr>
<th>Size mm</th>
<th>R_m (MPa)</th>
<th>Rp_0.2 (MPa)</th>
<th>A_5 (%) min</th>
<th>KV (J) +20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤16</td>
<td>360 - 510</td>
<td>235</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>&gt;16 ≤40</td>
<td>360 - 510</td>
<td>225</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>&gt;40 ≤63</td>
<td>360 - 510</td>
<td>215</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>&gt;63 ≤80</td>
<td>360 - 510</td>
<td>215</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>&gt;50 ≤100</td>
<td>360 - 510</td>
<td>215</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>&gt;100 ≤150</td>
<td>350 - 500</td>
<td>195</td>
<td>22</td>
<td>27</td>
</tr>
</tbody>
</table>

**MECHANICAL PROPERTIES - BRIGHT PRODUCTS CONDITION**

<table>
<thead>
<tr>
<th>Size mm</th>
<th>Turned (+SH)</th>
<th>Cold Drawn (+C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Size mm</th>
<th>R_m (MPa)</th>
<th>Rp_0.2 (MPa) min</th>
<th>R_m (MPa)</th>
<th>A (%) min</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥5 ≤10</td>
<td>107-152</td>
<td>360-510</td>
<td>260</td>
<td>390-730</td>
</tr>
<tr>
<td>&gt;10 ≤16</td>
<td>107-152</td>
<td>360-510</td>
<td>235</td>
<td>380-670</td>
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<tr>
<td>&gt;16 ≤40</td>
<td>107-152</td>
<td>360-510</td>
<td>215</td>
<td>360-640</td>
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<tr>
<td>&gt;40 ≤63</td>
<td>107-152</td>
<td>360-510</td>
<td>215</td>
<td>360-640</td>
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<tr>
<td>&gt;63 ≤100</td>
<td>107-152</td>
<td>360-510</td>
<td>215</td>
<td>360-640</td>
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</table>

**WORKING TEMPERATURES RECOMMENDED**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Hot forgings deformation</th>
<th>Soft annealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td>900-1150</td>
<td>650-700</td>
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</table>