DIN - Material - No. 1.2738
Code 40CrMnNiMo 8-6-4
Comparable standards AISI: P-20+Ni

Chemical composition

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>Mn</th>
<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Typical analysis %)</td>
<td>0.40</td>
<td>1.50</td>
<td>1.95</td>
<td>1.05</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Steel properties
Plastic Mould steel, hardened and tempered (280-325 BHN) to 950 - 1100 N/mm². Good machinability, excellent polishability, suitable for texturing. Improved through hardenability compared to W. Nr. 1.2311.

Physical properties

<table>
<thead>
<tr>
<th></th>
<th>Thermal conductivity W/(m.K)</th>
<th>20°C</th>
<th>35.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient of linear thermal expansion $10^6 \degree C^{-1}$</td>
<td>20-100</td>
<td>20-200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11.7</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Applications
Large and medium size moulds (over 400 mm thickness) for plastic processing, synthetic plastic moulds and dies, mould frames for injection moulding and pressure die casting dies.

Stress Relieving
Holding at approx 650°C for one - two hours.

Heat treatment
Soft annealing°C 710 - 740 Cooling furnace
Hardness HB max. 235

Hardening from°C
840 - 860 Oil, air, thermal bath
180 - 220°C

Hardness after quenching HRC 52

Tempering Diagram

Time - Temperature - Transformation - Diagram

Tempering Diagram

USBCO STEELS PVT LTD