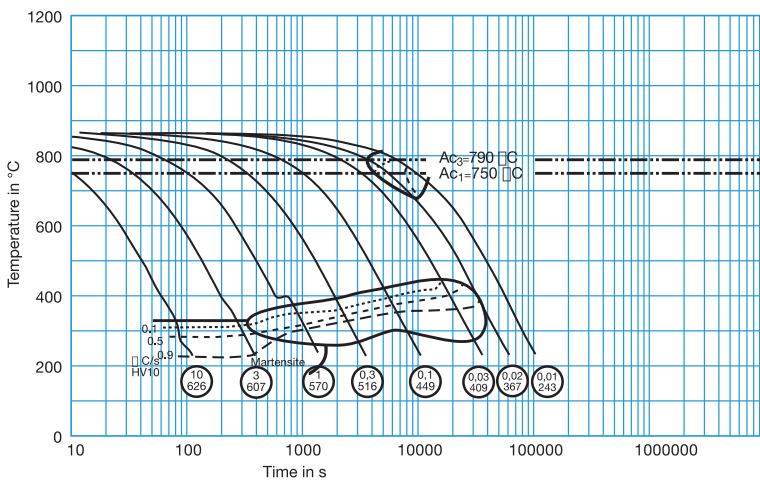


# Formadur® 320/320 Superclean

**C 0.34 Mn 0.80 Cr 1.70 Ni 0.50 Mo 0.40**

<b>Steel properties</b>	Heat-treated mould steel with improved quenching and tempering properties in comparison to 1.2738. Good machinability, polishable, weldable and can easily be textured. Formadur® 320 is either available at a hardness of 280 – 325 HB or 310 – 355 HB. This grade offers substantial improvements, especially for building larger and complex moulds. Specific modifications of the grade's components as well as additional smelting and secondary metallurgy ensure Formadur® 320's outstanding properties. We recommend the use of Formadur® 320 Superclean (ESR) for the highest demands.						
<b>Physical properties</b>	<b>Coefficient of thermal expansion</b> <b>at °C</b> 20 - 100   20 - 200   20 - 300   20 - 400   20 - 500   20 - 600   20 - 700 <b>10<sup>-6</sup> m/(m • K)</b> 11.1   12.9   13.4   13.5   13.8   14.1   14.3  <b>Thermal conductivity at °C</b> 20   350   700 <b>W/(m • K)</b> 36.0   37.4   33.0						
<b>Applications</b>	Formadur® 320 is highly suitable for large-format plastic injection and extrusion moulds with deep engraving and high demands on core strength, such as with bumpers, tailgates, fenders, spoilers, instrument panels and TV housings to name a few. At a supplied hardness of 310 – 355 HB, maximum wear resistance is guaranteed.						
<b>Heat treatment</b>	<b>Soft annealing °C</b> 710 – 740  <b>Hardening °C</b> 820 – 850  <b>Tempering °C</b> <b>HRC</b>	<b>Cooling</b> Furnace  <b>Quenching</b> Polymer or oil  100   200   300 51   50   48	<b>Hardness HB</b> max. 235  <b>Hardness after quenching HRC</b> 51  400   500   600   700 47   42   35   28				

## Time-temperature-transformation-diagram



## Tempering diagram

