



AISI 4140 4140 42Cro4

32CrMoV12-28

C 0.35 Cr 0.90 Mo 0.18 S 0.04 Fe 96.85 Si 0.20

Steel properties

4140 is a 1% chromium - molybdenum medium hardenability general purpose high tensile steel - usually provided hardened and tempered in the tensile range of 850 - 1000 Mpa (condition).4140 is currently out there with improved machinability, that greatly increases feeds or speeds, while also extending tool life while not adversely affecting mechanical properties.

Standards

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Physical properties

<b>Thermal conductivity at °C</b>	20	350	700
<b>W/(m • K) Annealed</b>	42.0	42.2	42.4

Applications

This alloy finds many applications as forgings for the aerospace and oil and gas industries, along with myriad uses in the automotive, agricultural and defense industries, typical uses are forged gears and shafts, spindles, fixtures, jigs and collars.

Heat treatment

<b>Soft annealing °C</b> 680 – 720	<b>Cooling</b> Furnace	<b>Hardness HB</b> max. 241
<b>Hardening °C</b> 820-860	<b>Quenching</b> 840 or Oil	<b>Hardness after quenching HRC</b>
<b>Stress-relief annealing °C</b> 550 - 600	<b>Tempering °C</b> 540-640 water Cooling °C Furnace	53

