

Material type

**Metal**

Material name

**Alloy steel 4340 | 1.6511 | 36CrNiMo4 | EN24**

Alternative names

**30CrNiMo8, 1.658**

Process compatibility

**CNC machining****Mechanical properties**

Ultimate tensile strength	690 - 1080 MPa
Yield strength	470 - 630 MPa
Young's modulus (modulus of elasticity)	205 - 213 GPa
Elongation at break	15 - 22 %

**Thermal properties**

Maximum service temperature	613 - 652 °C
Thermal expansion coefficient	11.5 - 13 10 <sup>-6</sup> /°C
Thermal conductivity	35 - 50 W/(m·°C)

**Post treatments**

Post-Processing	Tempering & Annealing
Anodizing compatibility	Not suitable

**Physical properties**

Corrosion resistance	Moderate to Poor
Magnetism	Semi-Magnetic
UV resistance	Excellent
Weldability	Moderate

**Electrical properties**

Electrical resistivity	18 - 27 μΩ*cm
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**Common applications**

High tensile applications
General engineering parts
Connecting rods & bolts

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