



440C Stainless Steel

440C stainless plate, round and flat bar

440C stainless steel stockholders and suppliers, delivering throughout the UK.

440C grade provides good wear resistance combined with moderate corrosion resistance in mild environments and has excellent hardenability. 440C is very similar to the 440B grade but with a slightly higher carbon content. It attains a higher hardness than that of 440B but with a slight reduction in its corrosive properties. It can achieve a hardness of up to 60 Rockwell HRC. It resists corrosion in normal domestic environments and very mild industrial environments, with optimum corrosion resistance achieved with a temper below about 400°C. To achieve best corrosion resistance, surfaces must be free of scale, lubricants, foreign particles, and coatings applied for drawing and heading. With its high carbon content 440C annealed stainless machines similar to a high speed steel annealed grade.

Related Specifications

1.4125 X105CrMo17 Z100CD17 X102CrMo 17KU
ASTM A276 UNS S44004 AISI 440

Alternative stainless steel grades we supply

[17/4PH](#) | [FV520B](#) | [S31254](#) | [904L](#) | [316](#) | [310](#) | [304](#)
[440C](#) | [440C](#) | [420](#) | [410](#) | [416](#) | [431](#) |

Form of Supply

West Yorkshire Steel are suppliers and stockholders of round bar. Diameters can be sawn to your required lengths as one offs or multiple cut pieces. 440C precision ground steel bar can be supplied, providing a high quality stainless steel ground bar to your required tolerances.



■ Diameter

Contact our experienced sales team who will assist you with your 440C enquiry.

Applications

Suitable for applications requiring a combination of excellent wear resistance with moderate corrosion resistance, 440C is commonly used in the oil and gas, marine, food and medical industries. Typical applications are pumps, valve components, bearings, knives, surgical tools, cutlery, bearings and races.

Analysis

Carbon	0.95-1.20%	Silicon	1.00% max
Manganese	1.00% max	Chromium	16.00-18.00%
Molybdenum	0.75% max	Sulphur	0.03% max
Phosphorous	0.04% max		

Forging

440C stainless steel can be forged by heating slowly and uniformly to 1050-1150°C, allowing sufficient time for the steel to become heated through. Ensure not to overheat as this can cause a loss of toughness and ductility. Do not forge below 900°C reheating if necessary. After forging cool slowly in furnace or thermoinsulating material, then anneal immediately. Air cooling after forging may cause cracking.

Annealing

To anneal 440C stainless steel, heat uniformly to 840-875°C. Soak and cool very slowly in the furnace.

Hardening

To harden stainless steel 440C heat to 1010-1070°C, fully soak and quench in warm oil or air cool. Be careful not to overheat or full hardness will not be obtained.

Tempering

When tempering 440C a Rockwell hardness of 60HRc can be obtained. Temper for at least one hour. Tempering above 400°C is not recommended as this can cause a reduction in corrosion resistance and impact properties.

Temperature °C	150	200	250	300	350
Hardness HRc	60	59	57	56	56

Heat Treatment

Heat treatment temperatures, including rate of heating, cooling and soaking times will vary due to factors such as the shape and size of each component. Other considerations during the heat treatment process include the type of furnace, quenching medium and work piece transfer facilities. Please consult your heat treatment provider for full guidance on heat treatment of 440C stainless steel.

Typical Mechanical Properties*

Temp °C	Tensile (UTS) N/mm ²	0.2% Yield N/mm ²	Elongation %	Hardness HRc	Reduction of Area
20	1965	1896	2	57	10

(*hardened at 1040°C, oil quenched and tempered at 250°C)

Certification

Stainless steel 440C grade is available with BS EN 10204 3.1 mill certificate, please request when placing any orders.

Quality Assured Supply

440C stainless steel is supplied in accordance with our ISO 9001:2015 registration.



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