

## 420 Stainless Steel

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**420 stainless steel stockholders and suppliers, delivering to the whole of the UK.** West Yorkshire Steel are suppliers of 420 stainless steel grades in round bar, plate and sheet. 420 grade is a martensitic, higher carbon version of type 410. Available in different variations of carbon content 420 stainless is suitable for heat treatment. 420 stainless has a 13% chromium content which gives the specification a level of corrosion resistance properties. British standard grades available are 420S29, 420S37, 420S45. We also supply European stainless steel specifications 1.2083 and 1.4034, both which have a higher carbon content and achieve a good Rockwell hardness when heat treated.

We welcome export enquiries for stainless steel. Contact our sales office and consult our [shipping policy](#) for further details.

### Related Specifications

1.4021 1.4028 1.4034 1.2083 ASTM A276 S42000  
BS EN 10088 AISI BS970 UNS X20Cr13 X30Cr13

### Alternative stainless grades we supply

[17/4PH](#) | [FV520B](#) | [S31254](#) | [904L](#) | [310](#) | [316](#) | [321](#) | [440B](#) | [440C](#) | [410](#) | [416](#) | [431](#) | [S31803](#) | [S32760](#)

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## 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. 420 ground steel bar can be supplied, providing a high quality precision ground finish to your close tolerances. 420 stainless steel plate and sheet are available to European steel grades 1.2083 and 1.4034, which can be supplied as full plates and sheets or can be cut to your requirements.

- Sheet
  - Plate
  - Diameter
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## Applications

420 stainless is widely used in the medical and cutlery industries. It is suitable for applications such as instruments, knives, hand tools, pump shafts and plastic moulds. 420 is not recommended for use in temperatures above the relevant tempering temperature, because of the reduction in mechanical properties.

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## Analysis 420S29

Carbon	0.14-0.20%	Chromium	11.50-13.50%
Manganese	1.00% max	Sulphur	0.030% max
Silicon	1.00% max	Phosphorous	0.040% max
Nickel	1.00% max	Molybdenum	0.300% max

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## Analysis 420S37

Carbon	0.20-0.28%	Chromium	12.00-14.00%
Manganese	1.00% max	Sulphur	0.030% max
Silicon	1.00% max	Phosphorous	0.040% max
Nickel	1.00% max	Molybdenum	0.300% max

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## Analysis 420S45

Carbon	0.28-0.36%	Chromium	12.00-14.00%
Manganese	1.00% max	Sulphur	0.030% max
Silicon	1.00% max	Phosphorous	0.040% max
Nickel	1.00% max	Molybdenum	0.300% max

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## Analysis 1.2083

Carbon	0.36-0.42%	Chromium	12.50-14.50%
Manganese	1.00% max	Sulphur	0.030% max
Silicon	1.00% max	Phosphorous	0.030% max

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## Analysis 1.4034

Carbon	0.43-0.50%	Chromium	12.50-14.50%
Manganese	1.00% max	Sulphur	0.015% max
Silicon	1.00% max	Phosphorous	0.040% max

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## Corrosion Resistance

Best corrosion resistance of 420 stainless is achieved when 420 is hardened and surface ground or polished. In the hardened condition 420 has good corrosion resistance to atmosphere, foods, fresh water, mild alkalis and acids, steam, crude oil and other similar corrosive media.

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## Hardening

420 is suitable for heat treatment up to 52 HRC or higher depending on the carbon content and size of the component. European grade 1.2083 is a high carbon type 420 stainless and is ideally suited for application where highest achievable hardness is required.

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## 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 420 stainless steel 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 stainless steel 420 grade.

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## Certification

420 stainless steel grade is available with BS EN 10204 3.1 mill certificate or cast and analysis certification. Please request any material certificate requirements when placing your order.

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## Quality Assured Supply

Stainless Steel 420 specification is supplied in accordance with our ISO 9001:2015 registration.