

British Steel's freecutting steels are used to manufacture a huge range of precision components in the automotive and office equipment industries.



**We supply a wide range of compositions to meet national and international specifications, as well as customers' individual requirements.**

#### Freecutting steels

These grades of steel are designed to withstand the high-speed manufacturing processes used for precision components.

#### Semi freecutting steels

British Steel's range of semi freecutting steels offers high performance where a combination of machinability and strength is required.

#### Rigorous testing for quality assurance

The quality of our products is assured by rigorous testing procedures conducted in well-equipped laboratories to verify stringent criteria such as segregation, steel cleanliness, scale, surface quality, decarburisation, chemical composition, size, shape and tensile strength properties. Our products meet the required standards for the most challenging and safety-critical applications.

British Steel is accredited to IATF 16949:2016 the internationally-adopted quality management system standard for the automotive industry, ISO 9001:2015 for our quality management system and ISO 14001:2015 for our environmental management system.

#### Delivering quality

Our streamlined dispatch facilities allow us to offer an efficient delivery service. The combination of bespoke lifting equipment and minimal handling avoids post-rolling surface-related issues.

#### Global reach: local supply

We have wire rod manufacturing facilities in the UK and the Netherlands, supplying premium products around the world, supported by an international network of regional sales teams, so our global customers receive local service.

#### Technical support from our specialists

Our team of experienced metallurgists provides dedicated technical support to our customers, including selection of the most appropriate steel grade and size, detailed metallurgical analysis to solve specific processing problems, and the development of new and more advanced grades of steel for increasingly demanding applications.

#### Wire rod dimensions

<b>Rod diameter</b>	5.5 - 30.0mm in 0.5mm increments
<b>Coil weight</b>	1,800 - 2,200kg
<b>Coil length</b>	1,000 - 1,700mm
<b>Coil dimensions</b>	Outside diameter: 1,300mm max Inside diameter: 800mm min

**Note:** Coil weight and length are dependent on rod diameter and grade combination. Specific coil package dimensions to be agreed at time of order placement/enquiry.

## Freecutting steel grades

The tables below indicate the typical chemical analysis for British Steel's freecutting grades. Other grades can be considered and are available upon request.

### Leaded freecutting grades

Standard	Grade	Typical supplied chemical analysis (ladle)						
		C	Si	Mn	P	S	Pb	N
EN ISO 683-4	11SMnPb30	0.07-0.09	<0.01	100-105	0.05-0.07	0.28-0.32	0.26-0.29	-
	11SMnPb30 (High Pb + N)	0.07-0.09	<0.01	105-110	0.05-0.07	0.28-0.32	0.29-0.33	0.009-0.012
	11SMnPb37	0.07-0.09	<0.01	120-130	0.06-0.08	0.35-0.39	0.28-0.33	0.007-0.012
	36SMnPb14	0.33-0.36	0.15-0.19	145-155	0.025 max	0.10-0.14	0.20-0.25	-
EN ISO 683-3	C15Pb	0.13-0.15	0.20-0.25	0.40-0.50	0.025 max	0.020-0.030	0.20-0.25	-
EN ISO 683-1	C45Pb	0.44-0.48	0.20-0.25	0.60-0.70	0.020 max	0.020-0.040	0.20-0.25	0.012 max
AISI/SAE	12L14	0.07-0.09	<0.01	100-105	0.05-0.07	0.28-0.32	0.26-0.29	-

### Non-leaded freecutting grades

Standard	Grade	Typical supplied chemical analysis (ladle)						
		C	Si	Mn	P	S	N	Cr
EN ISO 683-4	11SMn30	0.07-0.09	<0.01	0.98-1.02	0.05-0.07	0.27-0.31	-	-
	11SMn37	0.07-0.09	<0.01	120-130	0.06-0.08	0.35-0.39	0.007-0.012	-
	38SMn28	0.36-0.38	0.15-0.20	130-140	0.025 max	0.27-0.30	-	0.07-0.10
	44SMn28	0.42-0.43	0.20-0.25	155-160	0.025 max	0.27-0.30	-	-
	46S20	0.44-0.47	0.15-0.20	100-105	0.025 max	0.18-0.22	-	0.12-0.17
AISI/SAE	1144	0.42-0.43	0.20-0.25	155-160	0.025 max	0.27-0.30	-	-
	1215	0.07-0.09	<0.01	0.98-1.02	0.05-0.07	0.27-0.31	-	-

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