

Rail clips require fatigue-resistant spring steel with consistent properties to meet our customers' stringent and safety-critical requirements.



British Steel's wire rod for rail clip applications addresses the industry's needs for strength, formability, ductility and fatigue resistance.

Working in partnership to meet customer needs

British Steel works in partnership with customers to understand the exacting requirements for safety-critical applications in the global rail industry.

Compliant with a variety of national and international standards and customer-specific requirements, our spring grades have a uniform microstructure to facilitate efficient downstream processing, combined with dimensional accuracy and excellent surface quality, ensuring reliable long life in track.

Our wire rod is supplied with a fine lamellar pearlite structure for optimum wire drawing and can also be supplied with an annealed structure for enhanced formability. For further details of our processing capability, please refer to our Wire Processing Centre datasheet.

Rigorous testing for quality assurance

The quality of our products is assured by our comprehensive testing procedures at our integrated site. Our products meet the required standards for the most arduous and safety-critical applications.

British Steel's and FN Steel's quality management systems are accredited to ISO 9001:2015 and environmental management systems are accredited to ISO 14001:2015.

Delivering quality

Our streamlined dispatch facilities and network of transport providers allow us to offer an efficient delivery service. The combination of bespoke lifting equipment and minimal handling avoids post-rolling surface-related issues, while our logistics partners ensure material is delivered to meet just-in-time production schedules.

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

Rod diameter	5.5 - 16.0mm in 0.5mm increments
Coil weight	1,800 - 2,200kg
Coil length	1,000 - 1,700mm
Coil dimensions	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.

Rail spring steel grades

The table below indicates the typical chemical analysis levels and mechanical properties for British Steel's as-rolled spring steel grades for rail clip applications.

Chemical analysis

Standard	Grade	C	Si	Mn	P	S	Cr	V
EN10089	38Si7	0.35 - 0.42	1.50 - 1.80	0.50 - 0.80	≤ 0.025	≤ 0.025	≤ 0.30	≤ 0.10

Mechanical properties

Standard	Grade	UTS (MPa)	RoA (%)
EN10089	38Si7	750 - 880	45 min

Bespoke qualities for unique applications

Other grades can be considered and are available upon request. Please contact us to discuss your requirements.

Rail clip image courtesy of Pandrol

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