

EN19T

Quality EN19T cut and delivered in rounds or flats, whatever size you need.

EN19T steel stockholders and suppliers, delivering to the whole of the UK.

A high quality alloy steel specification usually supplied as a high tensile steel grade to EN19T or EN19U. This grade offers good ductility and shock resisting properties combined with resistance to wear. With these characteristics it is a popular high strength engineering steel with a tensile of 850/1000 N/mm². At low temperatures EN19T has reasonably good impact properties. It is also suitable for a variety of elevated temperature applications. For maximum wear and abrasion resistance EN19T can be nitrided to give a shallow depth wear resistant case. Flame or induction hardening can give a case hardness of 50 HRC or higher.

We welcome export enquiries for alloy steel. Contact our sales office and consult our shipping policy for further details.

Alternative [alloy steel](#) grades we supply

[EN16T](#) | [EN19T](#) | [EN24T](#) | [EN26W](#) | [EN30B](#) | [EN31](#)
[EN32](#) | [EN36](#) | [EN40B](#) | [EN41B](#) | [EN45](#) | [EN47](#)

Form of Supply

West Yorkshire Steel are stockholders and suppliers of EN19T round bar and flat section bandsaw cut. Diameters in EN19T can be sawn to your required lengths as one offs or multiple cut pieces. EN19T ground steel bar can be supplied, providing a high tensile steel precision ground bar to tight tolerances.



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

- Flat
- Plate
- Diameter

Applications

Commonly used for general engineering applications EN19T is suitable for applications such as high tensile shafts, bolts and nuts, gears, pinions spindles and the like.

Analysis

| | | | |
|------------|------------|-------------|------------|
| Carbon | 0.35-0.45% | Silicon | 0.10-0.35% |
| Manganese | 0.50-0.80% | Chromium | 0.90-1.50% |
| Molybdenum | 0.20-0.40% | Phosphorous | 0.035% max |
| Sulphur | 0.05% max | | |

Forging

Pre heat carefully, then raise temperature to 850-1200°C for forging. Do not forge below 850°C. After forging cool slowly in still air.

Annealing

Heat the EN19T slowly to 680-700°C. Cool in air.

Hardening

This steel grade is commonly supplied ready heat treated. If further heat treatment is required annealed EN19 should be heated slowly to 860-890°C and after adequate soaking at this temperature quench in oil. Temper as soon as tools reach room temperature.

Tempering

Heat carefully to a suitable temperature selected by reference to a tempering chart or table. Soak at the temperature for 2 hours per 25mm of ruling section, then allow to cool in air. Tempering between 250-375°C is not advised as tempering within this range will reduce the impact value.

Typical Mechanical Properties*

| Condition | Tensile N/mm ² | Yield N/mm ² | Elongation % | Izod KCV J | Hardness Brinell |
|-----------|------------------------------|----------------------------|-----------------|---------------|---------------------|
| S | 777-925 | 555 | 13 | 22 | 223-277 |
| T | 850-1000 | 650 | 13 | 35 | 248-302 |
| U | 925-1075 | 755 | 12 | 42 | 269-331 |

(subject to ruling section*)

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 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 EN19T alloy steel.

Certification

EN19T alloy steel is available with cast and analysis certificate or a BS EN 10204 3.1 mill certificate, please request when placing any orders.

Quality Assured Supply

EN19T is supplied in accordance with our ISO 9001:2015 registration.