

EN32 (080M15)

CASE HARDENING ENGINEERING STEEL

PRODUCT OVERVIEW

EN32 (080M15) is a bright drawn engineering steel with low tensile strength and is intended for use in general engineering applications, particularly for low stressed components. Classed as an unalloyed low carbon engineering steel grade, when case hardened the material offers a hard, outer surface with tough internal core. Tempering of EN32 is recommended to offer maximum case toughness and stress relief with a tempering range from 150 – 200°C. A core strength of up to 490 N/mm² can be achieved for components when carburised. EN32 should be considered for any lightly stressed applications where good wear resistance is a consideration. Other engineering steels should be considered where extra strength is required.

EN32 (080M15) can be viewed as a 'crossover' material as essentially it is the same product as EN3B but is marketed and supplied specifically for case hardening work.



MACHINABILITY

EN32 (080M15) benefits from being readily machinable and weldable in the supplied condition. As EN32 is a cold drawn material it is produced to much tighter sectional tolerances when compared to mild steel equivalents. Being flatter and straighter promotes better machining consistency and a more consistent cross section. Our EN32 bar product is supplied in a variety of incremental sizes which often removes the need for customers to have the bar machined down.

By offering EN32 in a form which is closer to your individual requirements ensures that you save time and unnecessary expense.

MATERIAL AVAILABILITY

Round bar, square bar and flat bar

ADDED COST SAVINGS

Another cost saving factor is our ability to provide you with EN32 bar stock which is highly consistent in terms of quality and performance on a repetitive basis. This provides numerous benefits – for example, as we purchase EN32 from prime suppliers, the consistency of the product will mean that you may not need to change your machining setup due to variances in batches.

This level of consistency will undoubtedly have an impact on your supply chain and through costs.

TEMPERING

Recommended for maximum case toughness and stress relief. Range from 150-200°C.

FOR CHEMICAL AND MECHANICAL PROPERTIES, PLEASE REFER TO THE REVERSE SIDE OF THIS TECHNICAL DATASHEET

PRODUCT BENEFITS

- Case hardened engineering steel
- For lightly stressed components
- Good wear resistance
- Readily machinable and weldable
- Same as EN3B but for case hardening work
- Produced to tight sectional tolerances
- Available in round, square and flat bar

APPLICATIONS

EN32 (080M15) is a general engineering steel which is ideal for producing lightly stressed parts and components. Application examples include:

- Spindles and gears
- Bushes, rollers and cams
- Used in lightly stressed components
- Applications requiring good wear resistance
- Collet chucks

CHEMICAL COMPOSITION (weight %)

| | C | Mn | Si | P | S |
|-----|------|------|------|------|------|
| Min | 0.10 | 0.60 | 0.05 | 0.05 | 0.05 |
| Max | 0.18 | 1.00 | 0.35 | 0.05 | 0.05 |

MECHANICAL PROPERTIES *

| Tensile Strength N/mm ² | Elongation % | Impact Izod J | Impact KVC J |
|------------------------------------|--------------|---------------|--------------|
| 430 | 18 | 39 | 35 |

* blank case hardened. 29mm test piece.

ABOUT THAMES STOCKHOLDERS

Thames Stockholders is one of the UK's leading suppliers of engineering steels. We stock EN32 (080M15) in round bar, square bar and flat bar. We offer our stock products to both domestic and International customers. We can also process your products internally and cut your material to your exact size requirements. With ideal proximity to the UK's main motorway network and ports, our location is ideal for the supply and distribution of high-quality engineering steels.

To discover more about our products and to receive a competitive quotation, please call Thames Stockholders today to speak to a member of our technical team on +44 (0)20 8805 3282.