



## EN36 Black Steel Bars (16mm to 150mm) | Rolled & Annealed for Case Hardening Applications

### Description

EN36 is a **low-carbon nickel-chromium steel** known for its excellent **case hardenability and core toughness**. When carburized and heat treated, it develops a **high surface hardness** with a **ductile and tough core**, making it ideal for heavily loaded, wear-resistant components.

At **Steelmet Industries**, we supply **EN36 black bars in diameters from 16mm to 150mm**, available in **hot rolled or annealed condition**, tailored to your **case hardening process requirements**.

## Key Properties of EN36 Black Bars

- **Standard:** BS970:1955
- **Grade:** EN36
- **Carbon Content:** ~0.12 to 0.18%
- **Nickel Content:** ~3.00 to 3.75%
- **Chromium Content:** ~0.8 to 1.1%
- **Delivery Conditions:** Rolled / Annealed
- **Form:** Round Bars, Black Bars

- **Size Range:** 16mm to 150mm
- **Machinability:** Good in annealed condition
- **Case Hardening:** Excellent (carburizing depth up to 2.5mm)
- **Applications:** Gears, shafts, aerospace pins, camshafts, heavy-duty rollers

## Applications of EN36

EN36 black steel bars are widely used in:

- **Transmission components** (gears, shafts, hubs)
- **Camshafts and crankshafts**
- **Pins and rollers in heavy machines**
- **Defense and aerospace-grade parts**
- **Automotive wear-resistant components**

Its popularity in demanding mechanical applications stems from its **durability, excellent wear resistance, and impact strength** after carburizing.

## Related Grades and Variants

Steelmet Industries also offers **EN36 variants and equivalent grades**, each with slightly adjusted chemistries to suit particular applications:

Grade	C (%)	Cr (%)	Ni (%)	Mo (%)	Use Notes
EN36	0.12-0.18	0.8-1.1	3.0-3.75		Standard case hardening steel
EN36A	0.14-0.19	0.9-1.1	3.25		Improved case depth and hardness
EN36B	0.14-0.19	0.9-1.1	3.5		Aerospace-grade case hardening
EN36C	0.16-0.20	1.0-1.2	3.5-3.75		Enhanced wear and heat resistance

Grade	C (%)	Cr (%)	Ni (%)	Mo (%)	Use Notes
EN26	0.35-0.45	1.2-1.5	1.3-1.8	0.2-0.4	Higher core strength alternative

*Variants like EN36A/B/C and EN26 are supplied subject to availability and customer specifications. Contact us for exact specifications and documentation.*

## International Equivalent Grades

Standard	Grade / Equivalent
BS970:1991	655M17
AISI / SAE	8620 (close)
DIN	17NiCrMo6 / 1.6587
ISO	17CrNiMo6
JIS	SNCM220
IS	17CrNiMo6
GOST	18ÐÑÐÑÐÑ (18KhGNM)
GB (China)	20CrNiMo

*Disclaimer: Grade equivalents are based on chemical composition and are subject to application-specific requirements. Please verify with actual mechanical and metallurgical properties before final use.*

## Why Choose Steelmet Industries?

At Steelmet Industries, we serve both **domestic and global markets** with:

- **Wide size range** From 16mm up to 150mm
- **Custom lengths** and size tolerances on request
- **Full documentation support** MTCs, third-party inspection, lorry receipts, test reports
- **Prompt and scheduled deliveries**
- **Material traceability and accountability**
- **Also available in other forms:** EN36 rounds in bright or forged forms on request

Explore our services:

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## Frequently Asked Questions about EN36 Bars

### Q1. What are EN36 black bars used for?

**Answer:** EN36 black bars are widely used for components like gears, camshafts, and shafts that need a hard, wear-resistant surface and a tough core after carburizing.

### Q2. How is EN36 different from EN36B or EN26?

**Answer:** EN36B has tighter control and better case hardening response, often used in aerospace. EN26 has higher carbon and molybdenum, offering better core strength.

### Q3. Can Steelmet provide third-party inspection and full traceability?

**Answer:** Yes. Steelmet Industries can provide full documentation and third-party inspection reports upon prior agreement.

### Q4. Are EN36 bars supplied in annealed condition?

**Answer:** Yes. EN36 black bars can be supplied in either **rolled** or **annealed** condition based on customer need.

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## Contact Us for EN36 Black Bar Requirements

• Submit an enquiry here: [Steelmet Enquiry Form](#)

• Website: [www.steelmet.in](http://www.steelmet.in)

India: 0712-2728071

WhatsApp: +917122728071

International: +91-712-2728071

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**Data**

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**Author**

admin

*Steelmet Industries - Bright Bars, Alloy  
Steels, Free Cutting Steels, Stainless Steels*