



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

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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:** ~0.12–0.18%
- **Nickel Content:** ~3.00–3.75%
- **Chromium Content:** ~0.8–1.1%
- **Delivery Conditions:** Rolled / Annealed
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**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 |

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| Grade | C (%)     | Cr (%)  | Ni (%)   | Mo (%)  | Use Notes                         |
|-------|-----------|---------|----------|---------|-----------------------------------|
| 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 |
| 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.

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## International Equivalent Grades

| Standard   | Grade / Equivalent |
|------------|--------------------|
| BS970:1991 | 655M17             |
| AISI / SAE | 8620 (close)       |
| DIN        | 17NiCrMo6 / 1.6587 |
| ISO        | 17CrNiMo6          |
| JIS        | SNM220             |
| IS         | 17CrNiMo6          |
| GOST       | 18???? (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.

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## 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**
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## ? Material traceability and accountability

- ?? **Also available in other forms:** EN36 rounds in bright or forged forms on request

Explore our services:

- ? [What We Do](#)
  - ? [Our Quality Policy](#)
  - ? [View Specifications](#)
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## Frequently Asked Questions – 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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1. Posts
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1. BS970 Steel Bars
2. Carburizing Steel India
3. EN26
4. EN36 Supplier
5. EN36
6. EN36A
7. EN36B
8. EN36C
9. Nickel Chromium Steel
10. Rolled Annealed Steel

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