



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 | 0.02-0.03 | Standard case hardening steel |
| EN36A | 0.14-0.19 | 0.9-1.1 | 3.25 | 0.02-0.03 | Improved case depth and hardness |
| EN36B | 0.14-0.19 | 0.9-1.1 | 3.5 | 0.02-0.03 | Aerospace-grade case hardening |
| EN36C | 0.16-0.20 | 1.0-1.2 | 3.5-3.75 | 0.02-0.03 | 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

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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.

Contact Us for EN36 Black Bar Requirements

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

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admin

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