

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

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

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:** ~0.12â??0.18%
- **Nickel Content:** ~3.00â??3.75%
- **Chromium Content:** ~0.8â??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

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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	0.12â??0.18	0.8â??1.1	3.0â??3.75	â??	Standard case hardening steel
EN36A	0.14â??0.19	0.9â??1.1	3.25	â??	Improved case depth and hardness
EN36B	0.14â??0.19	0.9â??1.1	3.5	â??	Aerospace-grade case hardening
EN36C	0.16â??0.20	1.0â??1.2	3.5â??3.75	â??	Enhanced wear and heat resistance

Grade	C (%)	Cr (%)	Ni (%)	Mo (%)	Use Notes
EN26	0.35â??0.45	1.2â??1.5	1.3â??1.8	0.2â??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	18Ð¥Ð?Ð•Ð? (18KhGNM)
GB (China)	20CrNiMo

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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:

- â? **Wide size range** â?? From 16mm up to 150mm
- â??ï¸• **Custom lengths** and size tolerances on request
- ð?§¾ **Full documentation support** â?? MTCs, third-party inspection, lorry receipts, test reports
- ð??¦ **Prompt and scheduled deliveries**
- ð??• **Material traceability and accountability**
- ð?? ï¸• **Also available in other forms:** EN36 rounds in bright or forged forms on request

Explore our services:
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Frequently Asked Questions â?? 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

ð??© Submit an enquiry here: Steelmet Enquiry Form
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