



EN8 Steel Properties, Equivalents, Applications | Steelmet Industries India

Description

Introduction

EN8 steel is a popular **medium carbon steel grade** known for its good tensile strength and machinability. It offers excellent performance in applications requiring strength, wear resistance, and moderate toughness. EN8 is used extensively across industries for producing shafts, axles, studs, keys, bolts, and machine parts.

At **Steelmet Industries**, we supply **EN8 steel bars** in a wide variety of shapes and conditions – **hot rolled, peeled, bright drawn**, and **custom-profiled**, ensuring dimensional accuracy and consistent quality. Whether your requirement is for small precision parts or heavy-duty industrial components, Steelmet is your trusted source.

Chemical Composition of EN8 Steel (Typical)

Element	Content (%)
Carbon (C)	0.36 – 0.44
Manganese (Mn)	0.60 – 1.00
Silicon (Si)	0.10 – 0.40
Sulphur (S)	≤ 0.050
Phosphorus (P)	≤ 0.050

Note: Clean steel options available with lower S & P upon request.

Mechanical Properties (Typical, in normalized condition)

Property	Value
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Tensile Strength	550 – 700 MPa
Yield Strength	280 – 450 MPa
Elongation (in 50 mm)	13 – 16%
Hardness (BHN)	180 – 230
Impact Strength (Izod)	40 – 55 J (approx)

Heat-treated variants can offer higher tensile strength and hardness.

Equivalent Grades

Standard	Grade
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AISI/SAE	1040 / 1045
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IS	40C8 (IS 1570)
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DIN/EN	C40 / C45
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JIS	S45C
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BS	080M40
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Common Applications

EN8 steel is widely used in:

- Transmission shafts and axles
 - Automotive parts (gears, bolts, crankshafts)
 - Agricultural and farm equipment
 - General engineering components
 - Machinery spindles, studs, and couplings
 - Railway and mining parts
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Machinability, Weldability & Heat Treatment

- **Machinability:** Excellent in normalized and cold drawn condition.
 - **Weldability:** Fair â?? Preheat and post-weld heat treatment recommended.
 - **Heat Treatment:** EN8 responds well to **hardening, tempering, normalizing,** and **annealing.**
 - **Hardening Range:** Up to HRC 50 with oil quenching.
 - **Surface Finish:** Bright drawn or ground finish available for high-precision requirements.
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EN8 Steel Forms Supplied by Steelmet Industries

At Steelmet Industries, we supply **EN8 steel bars** in the following forms:

- **Bright Steel Bars** â?? Drawn / Peeled / Ground
- **Hot Rolled Steel Bars**
- **Custom Special Profiles** â?? Round Corner Squares, Half Rounds, Tapered Flats
- **Shapes:** Rounds, Squares, Flats, Hexagons, Special

Size Range:

- **Rounds:** 10 mm to 150 mm
- **Flats/Squares:** Width/height as per requirement
- **Lengths:** Custom cut lengths up to 5.5â??6 meters or as required

Tolerances: As per IS/EN/AISI or custom tolerances.

Why Buy EN8 from Steelmet Industries?

- Superior dimensional accuracy & finish
- Custom sizes and shapes available
- VD (Vacuum Degassed) and non-VD options
- Fast delivery & flexible MOQs
- Full traceability with test certificates
- Access to NABL-certified labs for testing

We ensure consistency, traceability, and performance, making us a reliable partner for your steel needs.

Documentation & Compliance

- **TCs for Chemistry & Mechanical Properties**
- Conformance to IS, DIN, EN, ASTM standards
- Dimensional Inspection Reports
- Clean steel (low S & P) variants upon request

Get in Touch

Looking for reliable **EN8 steel bar suppliers** in India?
Steelmet Industries has you covered.

Visit us at: <https://www.steelmet.in>

Let us help you source the right grade, the right shape, at the right time.

Category

1. BS970 1955 EN8 Steel and variants

Tags

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Date

27/04/2026

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