



## EN8 vs 070M20 Steel: Comprehensive Comparison Guide

### Description

EN8 (1.0425) and 070M20 (1.0402) are two fundamental medium-carbon steels with distinct characteristics that engineers must understand for proper material selection. At **Steelmet Industries**, we supply both grades in various forms to meet your project requirements.

### Key Differences at a Glance

Parameter	EN8 Steel	070M20 Steel
Carbon Content	0.36-0.44% (Higher)	0.17-0.23% (Lower)
Tensile Strength	700-850 MPa	500-700 MPa
Primary Use	High-stress components	General engineering

### Detailed Comparison

#### 1. Chemical Composition

Element	EN8 (%)	070M20 (%)
Carbon	0.36-0.44	0.17-0.23
Manganese	0.60-1.00	0.60-1.00
Sulfur	≤0.05	≤0.05

**Key Insight:** EN8's higher carbon content makes it stronger but less ductile than 070M20.

#### 2. Mechanical Properties

- **EN8 Advantages:**

- Better wear resistance
- Superior response to heat treatment
- Higher load-bearing capacity

- **070M20 Advantages:**

- Easier machining
- Better weldability
- More cost-effective for simple components

### 3. Available Forms at Steelmet Industries

Both grades available as:

- **Bright bars** (∅5-150mm)
- **Black bars** (∅20-250mm)
- **Precision ground stock**
- **Custom forgings**

## Applications Comparison

### Best Uses for EN8:

- Gears and shafts
- Hydraulic components
- High-stress fasteners

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### Best Uses for 070M20:

- General fabrication
  - Cold-formed parts
  - Welded structures
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## Expert Recommendations

### Choose EN8 When:

- You need heat-treated components
- The application involves heavy loads
- Wear resistance is critical

### Choose 070M20 When:

- Cost is a primary factor
  - You require good weldability
  - The parts won't undergo extreme stress
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## Why Source From Steelmet Industries?

We provide:

- Certified material (EN 10204 3.1)
- Just-in-time delivery
- Custom processing (cutting, grinding)
- Technical support for material selection

**Contact our sales team today** for quotes on EN8 or 070M20 steel in your required specifications.

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## FAQ Section

### Q: Can 070M20 be heat treated like EN8?

A: While possible, EN8 responds better to quenching and tempering due to its higher carbon content.

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**Q: Which grade is better for machining?**

A: 070M20 machines more easily, though EN8 achieves good results with proper tooling.

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## Conclusion

Understanding the differences between EN8 and 070M20 steel ensures optimal material selection for your engineering projects. **Steelmet Industries** stands ready to supply both grades in all standard forms and sizes â?? contact us today to discuss your requirements.

## Category

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2. bright bars
3. EN8 steel
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