

EN8 vs 070M20 Steel: Comprehensive Comparison Guide

# Description net In

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, Is, Stainless Steels 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 â?¤0.05 â?¤0.05

**Key Insight:** EN8â??s higher carbon content makes it stronger but less ductile than 070M20.

### 2. Mechanical Properties

#### EN8 Advantages:

- o Better wear resistance
- Superior response to heat treatment
- Higher load-bearing capacity
- 070M20 Advantages:



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

# **Applications Comparison**

**Best Uses for EN8:** 

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



#### Best Uses for 070M20:

â?? General fabrication

â?? Cold-formed parts

â?? Welded structures

# **Expert Recommendations**

## **Choose EN8 When:**

You need heat-treated components

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Choose 070M20 When: Cutting Steels, Stainless Steels The application involves heavy loads

- The parts wonâ??t undergo extreme stress

# Why Source From Steelmet Industries?

We provide:

a? Certified material (EN 10204 3.1)

â? Just-in-time delivery

a? Custom processing (cutting, grinding)

a? Technical support for material selection

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

#### **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.



## Q: Which grade is better for machining?

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

#### 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 a?? contact us today to discuss your requirements.

## Category

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