



EN1A vs EN1A Leded Steel: Key Differences in Machinability & Composition

Description

Introduction

EN1A (230M07) and EN1A Leded (230M07 Pb) are popular free-cutting steels, but their small composition differences significantly impact machining behavior.

Steelmet Industries supplies both grades as:

• Cold-drawn bright bars (\varnothing 5mm-150mm)

• Precision ground stock

• Cut-to-length blanks ($\varnothing \pm 0.2$ mm tolerance)

Key Differences

Parameter	EN1A (230M07)	EN1A Leded (230M07 Pb)
Composition	0.07-0.13% C, 0.2-0.25% S	Added 0.15-0.35% Lead (Pb)
Machinability	Good (80% of 1214)	Excellent (130% of 1214)
Tool Wear	Moderate	Reduced by 30-40%
Surface Finish	Ra 3.2-6.3 μ m	Ra 1.6-3.2 μ m
Cost	Lower	Slightly higher
Weldability	Poor (due to S)	Not recommended

Applications

EN1A (Non-Leded)

- General-purpose turned parts
- Bushings & fittings
- Low-stress fasteners

EN1A Leaded

- High-volume CNC components
 - Watch/clock parts
 - Complex geometries requiring fine finishes
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Why Choose Leaded?

â? Benefits:

- 2â??3x longer tool life
- Higher machining speeds (+25%)
- Better chip breaking

â? Limitations:

- Not for welded/heat-treated parts
- Requires proper ventilation

Steelmet Industries offers both grades with:

- Drawn / Bright condition
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- Custom cutting & bundling

Conclusion

While standard EN1A suits general machining, **EN1A Leaded delivers superior productivity** for high-volume precision work.

Request more information of both grades from **Steelmet Industries** to check their performance in your application.

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