



## IS 2062:2011 Steel Grades Comparison Complete Guide

### Description

IS 2062:2011 is the Indian Standard for **hot-rolled medium and high tensile structural steel**, covering grades from E250 to E650. This guide compares:

- 9 base grades with 4 sub-qualities each
- Chemical composition requirements
- Mechanical properties
- Impact test requirements
- Recommended applications

**Steelmet Industries** supplies all IS 2062 grades as:

• Plates (3-100mm thickness)

• Sections (angles, beams, channels)

• Round/square/flat bars

### Grade Classification System

Grade	Minimum Yield Strength (MPa)	Sub-Qualities	Key Feature
E250	250	A, BR, B0, C	Basic structural grade
E275	275	A, BR, B0, C	Improved strength
E300	300	A, BR, B0, C	•••

Grade	Minimum Yield Strength (MPa)	Sub-Qualities	Key Feature
E350	350	A, BR, B0, C	Common construction grade
E410	410	A, BR, B0, C	High strength
E450	450	A, BR	â??
E550	550	A, BR	â??
E600	600	A, BR	â??
E650	650	A, BR	Highest strength grade

### Sub-Quality Explanation:

- **A:** No impact test required
- **BR:** Optional room temperature impact test
- **B0:** Mandatory 0Â°C impact test
- **C:** Mandatory -20Â°C impact test (best weldability)

## Key Comparison Tables

### 1. Chemical Composition (Selected Grades)

Element	E250A	E350C	E450A	E650A
C (max)	0.23	0.20	0.22	0.22
Mn (min)	1.50	1.55	1.65	1.70
P (max)	0.045	0.040	0.045	0.025
S (max)	0.045	0.040	0.045	0.015
CE (max)	0.42	0.47	0.52	0.55

\*Note: Stricter limits apply for sub-qualities B0/C\*

### 2. Mechanical Properties

Grade	Tensile (MPa)	Yield (MPa)	Elongation (%)	Impact Test Temp
E250	410	250	23	-20Â°C (Quality C)
E350	490	350	22	-20Â°C (Quality C)
E450	570	450	20	Room Temp (BR)
E650	780	650	12	Room Temp (BR)

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## Applications Guide

Grade	Typical Uses
E250	Light structures, roofing
E275	General construction
E350	Bridges, heavy structures
E410	High-rise buildings
E450+	Specialized heavy engineering

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## Why Choose Steelmet Industries?

We provide:

- All IS 2062 grades in stock
- Certified material (EN 10204 3.1/3.2)
- Custom cutting & processing
- Technical support for grade selection

**Contact us today** for quotes on IS 2062 steel plates, sections or bars!

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## FAQ Section

**Q: Can E250 be used for welded structures?**

A: Yes, but Quality C (-20°C impact tested) is recommended for critical welding.

**Q: Difference between E350A and E350C?**

A: E350C has stricter impurity controls and mandatory -20°C impact testing.

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## Conclusion

Understanding IS 2062 grade differences ensures optimal material selection for structural projects. **Steelmet Industries** stocks all grades from E250 to E650 • request samples or datasheets today!

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