



# E350BO – Technical Datasheet

## 1. Chemical Composition

Element	Composition (max)
C	0.20%
Mn	1.55%
P	0.045%
S	0.045%
Si	0.45%
CE	0.45% CE

## 2. Mechanical Properties

Property	Value
Yield Strength (MPa)	≥ 350
Tensile Strength (MPa)	490 – 610
Elongation (%)	≥ 22%
Impact Test	Optional; if required at RT (25 ± 2°C)
Hardness (HBW)	≤ 190

## 3. Equivalent / Alternative Grades

### 3.1 Chemical Properties Comparison

Standard	Grade	C (%)	Mn (%)	P (%)	S (%)
IS 2062	E350BO	0.20	1.55	0.045	0.045
ASTM A572	Gr 50	0.23	1.35	0.04	0.05
EN 10025	S355J0	0.20	1.60	0.030	0.030
GB/T 1591	Q345B	0.20	1.60	0.035	0.035
JIS G3106	SM490A	0.17	1.60	0.030	0.030

### 3.2 Mechanical Properties Comparison

Grade	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)
E350BO	≥ 350	490 – 610	≥ 22
ASTM A572 Gr 50	≥ 345	450 – 620	18 – 21
EN 10025 S355J0	≥ 355	470 – 630	≥ 20
GB/T 1591 Q345B	≥ 345	470 – 630	≥ 21
JIS G3106 SM490A	≥ 325	490 – 610	≥ 21

### 4. Common Applications

- Structural fabrication (beams, channels, plates)
- Construction of bridges and buildings
- Industrial equipment
- Railways and automotive frames

### 5. Standard Conformance

- Indian Standard: IS 2062:2011
- Grade designation: E350BO
- Part of the IS 2062 family; BO indicates semi-killed or killed steel with optional impact testing

### 6. Disclaimer

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