

# E350BO – Technical Datasheet

## 1. Chemical Composition

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

## 2. Mechanical Properties

Property	Value
<b>Yield Strength (MPa)</b>	≥ 350
<b>Tensile Strength (MPa)</b>	490 – 610
<b>Elongation (%)</b>	≥ 22%
<b>Impact Test</b>	Optional; if required at RT (25 ± 2°C)
<b>Hardness (HBW)</b>	≤ 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; B0 indicates semi-killed or killed steel with optional impact testing

### 6. Disclaimer

All chemical compositions, mechanical properties, dimensions and other technical data presented on this page are provided by Raunaq Steels Trading Pvt. Ltd. for general reference only. While we endeavour to ensure that the information is as accurate and up-to-date as possible, no warranty, express or implied, is given as to its completeness, correctness or fitness for any particular purpose. Raunaq Steels Trading Pvt. Ltd. accepts no liability for any loss or damage arising directly or indirectly from the use of, or reliance upon, the information contained herein. For authoritative and legally binding specifications, users must refer to the official publications of the relevant standards—such as the BIS, ASTM, EN or JIS standards—available through their respective websites or published documents.