

# E350C Technical Datasheet

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## 1. Chemical & Mechanical Properties

### A. Chemical Composition (% Max)

| Element | C    | Mn   | S     | P     | Si   | CE   |
|---------|------|------|-------|-------|------|------|
| Max     | 0.20 | 1.60 | 0.040 | 0.040 | 0.45 | 0.45 |

### B. Mechanical Properties

| Property                 | Value                       |
|--------------------------|-----------------------------|
| Yield Strength (Min)     | 350 MPa                     |
| Tensile Strength         | 490 – 610 MPa               |
| Elongation (on 5d gauge) | 22% (for thickness ≤ 20 mm) |
| Impact Strength          | 27 Joules min at -20°C      |
| Test Temperature         | -20°C                       |

## 2. Equivalent / Alternative Grades

### A. Equivalent Grades Table

| Standard   | Grade Name    |
|------------|---------------|
| ASTM       | A572 Grade 50 |
| EN 10025-2 | S355J2        |
| JIS        | SM490YA       |
| ISO        | FeE355KT      |

## B. Chemical Properties of Equivalent Grades

| Grade      | C    | Mn   | P     | S     | Si   | CE (if avail.) |
|------------|------|------|-------|-------|------|----------------|
| A572 Gr.50 | 0.23 | 1.35 | 0.035 | 0.040 | 0.40 | ~0.47          |
| S355J2     | 0.20 | 1.60 | 0.025 | 0.025 | 0.55 | ~0.45          |
| SM490YA    | 0.20 | 1.60 | 0.035 | 0.035 | 0.30 | -              |
| FeE355KT   | 0.20 | 1.50 | 0.035 | 0.035 | 0.50 | -              |

## C. Mechanical Properties of Equivalent Grades

| Grade      | YS (MPa) | TS (MPa) | Elongation (%) | Impact Test |
|------------|----------|----------|----------------|-------------|
| A572 Gr.50 | ≥345     | 450-620  | ≥18            | Optional    |
| S355J2     | ≥355     | 470-630  | ≥20            | 27J @ -20°C |
| SM490YA    | ≥355     | 490-610  | ≥21            | 27J @ -20°C |
| FeE355KT   | ≥355     | 490-610  | ≥22            | 27J @ -20°C |

## 3. Common Applications

- Heavy engineering structures
- Bridges and construction frameworks
- Industrial sheds and buildings
- Earthmoving and mining equipment
- High-strength welded components exposed to sub-zero environments

## 4. Standard Conformance

IS 2062:2011 (Indian Standard)

Grade: E350C

Sub-quality symbol "C" = impact tested at -20°C

## 5. Disclaimer

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