E350C Technical Datasheet

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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