RAUNAQ STEELS TRADING PRIVATE LIMITED

E550C – Technical Datasheet

1. Chemical & Mechanical Properties

A. Chemical Composition

Element	% Composition
Carbon (C)	≤ 0.26%
Manganese (Mn)	≤ 1.65%
Phosphorus (P)	≤ 0.045%
Sulphur (S)	≤ 0.040%
Silicon (Si)	≤ 0.50%
Copper (Cu)	0.15 – 0.35%

B. Mechanical Properties

Property	Value
Yield Strength (YS)	≥ 550 MPa
Tensile Strength (TS)	640 – 790 MPa
Elongation	≥ 14%
Hardness	210 – 240 HB
Impact Test	27J min at -10°C (Charpy V-Notch)

2. Equivalent / Alternative Grades

A. Chemical Composition Comparison

Standard	Grade	C (%)	Mn (%)	P (%)	S (%)	Si (%)	Cu (%)
IS 2062	E550C	≤ 0.26	≤ 1.65	≤ 0.045	≤ 0.040	≤ 0.50	0.15 – 0.35
EN 10025-2	S460J2+Cu	≤ 0.22	≤ 1.60	≤ 0.035	≤ 0.035	≤ 0.55	≥ 0.20
ASTM A572	Gr 70+Cu	≤ 0.23	≤ 1.35	≤ 0.040	≤ 0.050	≤ 0.40	≥ 0.20

B. Mechanical Properties Comparison

Standard	Grade	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation / Impact
IS 2062	E550C	≥ 550	640 – 790	≥ 14% / 27J @ -10°C
EN 10025-2	S460J2+Cu	≥ 460	510 – 680	≥ 22% / 27J @ -10°C
ASTM A572	Gr 70+Cu	≥ 480	620 – 780	≥ 15% / 20J @ RT

3. Common Applications

- Weather resistant steel

- Bridges

- Marine structures

- Heavy machinery

- Industrial fabrication

4. Standard Conformance

IS 2062:2011 – Indian Standard for Hot Rolled Medium and High Tensile Structural Steel.

Grade Code Meaning:

E: Killed steel; 550: Minimum yield strength in MPa; C: Copper added for corrosion resistance

5. Disclaimer