RAUNAQ STEELS TRADING PRIVATE LIMITED

E350A – Technical Datasheet

1. Chemical & Mechanical Properties

A. Chemical Properties of E350A

Element	Max %
Carbon (C)	0.20
Manganese (Mn)	1.50
Sulphur (S)	0.040
Phosphorus (P)	0.040
Carbon Equivalent (CE), max	0.45for thickness ≤ 20 mm)

B. Mechanical Properties of E350A

Property	Value
Yield Strength (YS)	≥ 350 MPa
Tensile Strength (TS)	490–610 MPa
Elongation (%)	22% (minimum)
Impact Strength	Notch impact test not mandatory (optional at 27°C)
Test Temperature	Room Temperature (~27°C)

2. Equivalent / Alternative Grades

A. Equivalent Grades for E350A

Standard	Grade Name
ASTM	ASTM A572 Gr.50
EN	S355JR
JIS	SM490A

B. Chemical Properties of Equivalent Grades

Grade	C (%)	Mn (%)	P (%)	S (%)	Si (%)	Others
ASTM A572 Gr.50	0.23	1.35	0.04	0.05	0.40	Cu: 0.20 min (for some types)
S355JR	0.24	1.60	0.035	0.035	0.55	-
SM490A	0.20	1.60	0.035	0.035	0.55	-

C. Mechanical Properties of Equivalent Grades

Grade	YS (MPa)	TS (MPa)	Elongation (%) / Impact Test
ASTM A572 Gr.50	≥ 345	450–620	≥ 21 / Optional
S355JR	≥ 355	470–630	≥ 20 / 27J at +20°C
SM490A	≥ 325	490–610	≥ 17 / Usually not mandatory

3. Common Applications

- Structural construction (bridges, buildings, heavy machinery)
- Industrial fabrication
- Railways and infrastructure
- Offshore and onshore structures
- Wind turbine towers

4. Standard Conformance

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

5. Disclaimer

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