RAUNAQ
TRUSTED STEEL

JSPL_Hard – Technical Datasheet

1. Chemical & Mechanical Properties

A. Chemical Composition

Element	% Composition
Carbon (C)	0.18 – 0.22% (approximate)
Manganese (Mn)	1.20 – 1.60% (approximate)
Phosphorus (P)	≤ 0.035%
Sulphur (S)	≤ 0.035%
Silicon (Si)	0.30 – 0.50% (approximate)

B. Mechanical Properties

Property	Value
Yield Strength (YS)	460 – 550 MPa (approximate)
Tensile Strength (TS)	600 – 740 MPa (approximate)
Elongation	≥ 16%
Hardness	180 – 220 HB (typical)
Impact Test	Not typically specified

2. Equivalent / Alternative Grades

A. Chemical Composition Comparison

Standard	Grade	C (%)	Mn (%)	P (%)	S (%)	Si (%)	Cu (%)
IS 2062	E450BR / E450C	≤ 0.22	≤ 1.65	≤ 0.045	≤ 0.040	≤ 0.45	-
ASTM A572	Gr 60 / 65	≤ 0.26	≤ 1.35	≤ 0.040	≤ 0.050	≤ 0.40	-

B. Mechanical Properties Comparison

Standard	Grade	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation / Impact
IS 2062	E450BR / E450C	≥ 450	540 – 670	≥ 18% / 27J @ 20°C
ASTM A572	Gr 60 / 65	≥ 415	550 – 700	≥ 18% / 20J @ RT

3. Common Applications

- Construction and structural steel

- Heavy machinery and fabrication

- Automotive parts

- Infrastructure projects

4. Standard Conformance

Conforms broadly to IS 2062 specifications for structural steel grades. Proprietary to JSPL with specialized processing.

Grade Code Meaning:

JSPL proprietary grade with higher hardness and tensile strength characteristics.

5. Disclaimer

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