RAUNAQ
TRUSTED STEEL

S690QL – Technical Datasheet

1. Chemical & Mechanical Properties

A. Chemical Composition

Element	% Composition
Carbon (C)	≤ 0.20%
Silicon (Si)	≤ 0.80%
Manganese (Mn)	≤ 1.70%
Phosphorus (P)	≤ 0.020%
Sulphur (S)	≤ 0.010%
Chromium (Cr)	≤ 1.50%
Nickel (Ni)	≤ 2.00%
Molybdenum (Mo)	≤ 0.70%
Boron (B)	≤ 0.005%

B. Mechanical Properties

Property	Value
Yield Strength (YS)	≥ 690 MPa (≤50 mm)
Tensile Strength (TS)	770 – 940 MPa
Elongation	≥ 14%
Impact Test	≥ 30 J at -40 °C

2. Equivalent / Alternative Grades

Standard	Grade	YS (MPa)	TS (MPa)	Impact
ASTM A514	Grade Q	690	760–895	≥ 27 J @ -40 °C
ISO 630-6	S690Q	690	770–940	≥ 30 J @ -40 °C
GB/T 16270	Q690D/E	690	770–930	≥ 27 J @ -40 °C

3. Common Applications

- Lifting equipment (crane booms)

- Heavy transport trailers

- Mining and earthmoving machinery

- Structural components requiring ultra-high strength

4. Standard Conformance

EN 10025-6:2004 + A1:2009 – Ultra-high strength Q&T structural steel.

"S" structural, "690" minimum yield (MPa), "Q" quenched & tempered, "L" -40 °C impact.

5. Disclaimer

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