

HUNAN BALING STEEL CO.,LTD

Add:NO.18 YIJIA GROUP,MULI MANAGEMNET OFFICE ECONOMIC DEVELOPMENT ZONE,
YUEYANG,HUNAN PROVINCE,P.R.CHINA.

Tel: +86 18216341633

E-mail Address: Lincoln@balingsteel.com Website:www.baling-steel.com



Datasheet for J55 casing and tubing



What Is J55 Casing?

J55 is the most widely used and readily available grade in API 5CT, offering a minimum yield strength of 55,000 psi through a normalizing heat treatment process. Its balanced strength-to-cost ratio makes it the go-to choice for shallow to medium-depth wells in non-corrosive environments.

- Applicable Product:Casing & Tubing 4½"–20".
- Thread Types: BC, STC / LTC.
- Available Lengths: R1 / R2 / R3.

Chemical Composition

API 5CT does not mandate a fixed chemical composition for J55. The table below reflects typical mill chemistry adopted by major producers to consistently meet the grade's mechanical requirements.

Element	Symbol	Typical Max (%)
Carbon	C	≤ 0.34
Manganese	Mn	≤ 1.20
Silicon	Si	≤ 0.45
Phosphorus	P	≤ 0.030
Sulfur	S	≤ 0.030
Chromium	Cr	≤ 0.30
Nickel	Ni	≤ 0.25
Molybdenum	Mo	≤ 0.10

Mechanical Properties

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Per API 5CT (latest edition). J55 is heat-treated by normalizing — no quench & temper required — making it the most cost-effective treated grade in the standard.

Property	Metric	Imperial	Note
Yield Strength — Min	379 MPa	55,000 psi	API Requirement
Yield Strength — Max	552 MPa	80,000 psi	API Requirement
Tensile Strength — Min	655 MPa	95,000 psi	API Requirement
Elongation — Min	$\geq 0.5 \times (A / 645)^{0.2}$ formula per API 5CT		Wall-thickness dependent
Hardness — Max	22 HRC	237 HBW	Full cross-section
Heat Treatment	Normalizing (N)		No Q&T required
Impact Test	Required (Charpy V-notch)		Unlike H40, J55 is not exempt
Sour Service (H ₂ S)	Not recommended		Use C90 / T95 for sour environments