

ASTM A516 Grade 70 – Technical Datasheet

1. Chemical & Mechanical Properties

Element / Property	Value
C	≤ 0.28%
Mn	≤ 1.35%
P	≤ 0.035%
S	≤ 0.035%
Si	≤ 0.40%
Cu	-
YS	≥ 260 MPa
TS	485 – 620 MPa
Elongation	≥ 21%
Impact	27J min at -29°C
Hardness	N/A

2. Equivalent / Alternative Grades

Standard	Grade	C (%)	Mn (%)	P (%)	S (%)	Si (%)	Cu (%)	YS (MPa)	TS (MPa)	Elongation / Impact
IS 2062	E450C / E450CCu	≤ 0.22	≤ 0.45	≤ 0.045	≤ 0.040	≤ 0.45	0.15 – 0.25	≥ 450	460 – 590	≥ 20% / 27J @ -10°C
EN 10025-2	S355J2+Cu	≤ 0.22	≤ 1.60	≤ 0.035	≤ 0.035	≤ 0.55	≥ 0.20	≥ 355	410 – 560	≥ 22% / 27J @ -10°C
ASTM A572	Gr 60	≤ 0.23	≤ 1.35	≤ 0.040	≤ 0.050	≤ 0.40	≥ 0.20	≥ 290	415 – 550	≥ 23% / 20J @ RT

3. Common Applications

- Boilers
- Pressure vessels

- Tanks

4. Standard Conformance

ASTM A516 Specification for Pressure Vessel Plates, Carbon Steel, for Moderate- and Lower-Temperature Service.

Grade Code Meaning:

Grade number indicates minimum yield strength in ksi (e.g. 70 = 70 ksi = 483 MPa)

5. Disclaimer

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