

# ASTM A516 Grade 80 – Technical Datasheet

## 1. Chemical & Mechanical Properties

Element / Property	Value
<b>C</b>	≤ 0.30%
<b>Mn</b>	≤ 1.40%
<b>P</b>	≤ 0.035%
<b>S</b>	≤ 0.035%
<b>Si</b>	≤ 0.50%
<b>Cu</b>	-
<b>YS</b>	≥ 310 MPa
<b>TS</b>	485 – 620 MPa
<b>Elongation</b>	≥ 18%
<b>Impact</b>	27J min at -29°C
<b>Hardness</b>	N/A

## 2. Equivalent / Alternative Grades

Standard	Grade	C (%)	Mn (%)	P (%)	S (%)	Si (%)	Cu (%)	YS (MPa)	TS (MPa)	Elongation / Impact
<b>IS 2062</b>	E500 (approximate)	≤ 0.25	≤ 1.60	≤ 0.040	≤ 0.040	≤ 0.40	-	≥ 500	540 – 670	≥ 16% / 27J @ -10°C
<b>EN 10025-2</b>	S420	≤ 0.22	≤ 1.60	≤ 0.035	≤ 0.035	≤ 0.55	-	≥ 420	470 – 630	≥ 22% / 27J @ 20°C
<b>ASTM A572</b>	Gr 65 / Gr 70	≤ 0.26	≤ 1.35	≤ 0.040	≤ 0.050	≤ 0.40	-	≥ 450	620 – 780	≥ 15% / 20J @ RT

## 3. Common Applications

- Specialized higher strength applications

#### 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. 80 = 80 ksi = 552 MPa)

#### 5. Disclaimer

All chemical compositions, mechanical properties, dimensions and other technical data presented on this page are provided by Raunaq Steels Trading Pvt. Ltd. for **general reference only**. While we endeavour to ensure that the information is as accurate and up-to-date as possible, **no warranty, express or implied, is given** as to its completeness, correctness or fitness for any particular purpose. Raunaq Steels Trading Pvt. Ltd. **accepts no liability** for any loss or damage arising directly or indirectly from the use of, or reliance upon, the information contained herein.

For **authoritative** and **legally binding** specifications, users must refer to the **official publications** of the relevant standards—such as the BIS, ASTM, EN or JIS standards—available through their respective websites or published documents.