

SA387 Grade 21 Class 1 – Technical Datasheet

1. Chemical & Mechanical Properties

A. Chemical Composition

Element	% Composition
Carbon (C)	0.05 – 0.17
Manganese (Mn)	0.40 – 0.80
Silicon (Si)	0.15 – 0.50
Phosphorus (P)	≤ 0.025
Chromium (Cr)	≤ 0.025
Sulphur (S)	1.00 – 1.50
Molybdenum (Mo)	0.45 – 0.65
Vanadium (V)	0.20 – 0.30

B. Mechanical Properties

Property	Value
Yield Strength	≥ 310 MPa
Tensile Strength	515 – 690 MPa
Elongation	≥ 18 %

3. Common Applications

- Hydrotreating reactors
- Heavy-wall vessels

4. Standard Conformance

ASTM A387 / ASME SA-387 – Chromium-Molybdenum Alloy Steel Pressure-Vessel Plates.

5. Disclaimer

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