

AS/NZS Grade 250 Structural Steel

Hot-Rolled Steel Plate & Coil (Compliant with AS/NZS 1594 & AS/NZS 3678)

Material Overview

Grade 250 is a widely utilized, low-carbon structural steel designed for general purpose fabrication and construction. It offers excellent weldability, formability, and reliable mechanical strength with a guaranteed minimum yield strength of 250 MPa. TIASCO supplies this grade under two specific Australian/New Zealand standards depending on the product form: **AS/NZS 1594 (HA250)** for hot-rolled steel coils and thin plates, and **AS/NZS 3678 (Grade 250)** for heavy structural steel plates.

KEY CHARACTERISTICS

- Excellent weldability across standard welding processes.
- Exceptional formability and bending properties.
- Consistent dimensional tolerances and surface quality.
- Full traceability with EN 10204 3.1 Mill Test Certificates.

TYPICAL APPLICATIONS

- General structural framing and building construction.
- Bridge components and civil infrastructure.
- Mining equipment and earthmoving machinery.
- Storage tanks, bins, and heavy transport trailers.

CHEMICAL COMPOSITION (MAXIMUM %)

The table below outlines the maximum allowable chemical limits based on cast analysis. Carbon Equivalent (CEQ) is calculated using the International Institute of Welding (IIW) formula to ensure superior welding performance.

Standard & Form	C	Si	Mn	P	S	Al	CEQ
AS/NZS 1594 (HA250) Coil / Thin Plate	0.20	0.35	1.20	0.040	0.030	0.100	0.39
AS/NZS 3678 (Grade 250) Heavy Plate ≤ 12mm	0.22	0.55	1.70	0.040	0.030	0.100	0.39
AS/NZS 3678 (Grade 250) Heavy Plate 12mm - 50mm	0.22	0.55	1.70	0.040	0.030	0.100	0.43
AS/NZS 3678 (Grade 250) Heavy Plate > 50mm	0.22	0.55	1.70	0.040	0.030	0.100	0.44

MECHANICAL PROPERTIES

Values represent the guaranteed minimums at ambient temperature. Yield strength requirements vary slightly depending on nominal material thickness.

Standard	Thickness (t)	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)
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EQUIVALENT INTERNATIONAL STANDARDS

For global procurement purposes, AS/NZS Grade 250 is frequently compared with the following international structural steel standards. While technically equivalent in general application, engineers should verify specific chemical and mechanical variations prior to substitution.

Region / Standard Body	Standard Document	Equivalent Grade	Notes
USA (ASTM)	ASTM A36 / A36M	Grade 36 / A283 Grade D	Standard carbon structural steel.
Europe (EN)	EN 10025-2	S235JR / S275JR	S275 provides a slightly higher yield limit.
Japan (JIS)	JIS G3101	SS400	Commonly substituted in Asian supply chains.
China (GB)	GB/T 700	Q235B	Widely used general structural equivalent.

DIMENSIONAL CAPABILITIES & SUPPLY RANGE

TIASCO maintains extensive stock levels and sourcing capabilities for both hot-rolled coils and heavy plates to meet varied project demands.

Product Type	Thickness Range	Standard Widths	Standard Lengths
Hot-Rolled Coil (HA250)	1.5mm – 16.0mm	900mm – 1500mm	Supplied in Coil or Slit / Cut-to-length
Structural Plate (Grade 250)	5.0mm – 200.0mm+	1200mm – 3200mm	6000mm – 12000mm

VALUE-ADDED PROCESSING & TESTING SERVICES

- Precision Cutting:** High-definition plasma cutting, oxy-fuel flame cutting, and laser cutting tailored to CAD specifications.
- Surface Treatment:** Shot blasting and application of shop primer coatings to protect against corrosion during transit and pre-fabrication.
- Edge Preparation:** Beveling and chamfering services available for immediate welding preparation upon delivery.
- Non-Destructive Testing (NDT):** Ultrasonic Testing (UT) can be performed to AS 1710 or EN 10160 standards to guarantee internal soundness for critical applications.
- Documentation:** Full material traceability is provided with every order, accompanied by EN 10204 3.1 Mill Test Certificates (MTC).

Ready to Request a Quote?

Send us your cut lists, drawings, or material schedules for a fast, competitive project proposal.

Website: www.tiasco.com | **Email:** Contact us via our website for immediate assistance.

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