

CHANGES TO STANDARDS: ENSURING QUALITY AND COMPLIANCE

Changes to Australian Standards for structural steel have been introduced to address industry concerns regarding product quality, identification, certification and traceability.

The goal is to improve compliance and generate increased confidence in structural steel quality in all end-use applications. As a key stakeholder in the construction and manufacturing industries, it is critical to have confidence in your structural steel. Revised Australian Standards now help to ensure you get the quality of structural steel that has been specified.

- **AS/NZS 1163:2009 Cold-formed structural steel hollow sections**
- **AS/NZS 3679.1:2010 Hot-rolled bars and sections**
- **AS/NZS 3679.2:2010 Welded sections**

What are the significant changes from the previous versions of these standards?

The major changes to these Australian Standards include mandatory requirements for:

- Minimum specific information on Test Certificates
- Testing to be performed by laboratories with third party accreditation from a signatory to International Laboratories Accreditation Cooperation (ILAC), such as NATA
- Individual length identification marked on all AS/NZS 1163 ex-mill tube lengths with information such as the manufacturer's name, site identification, traceable text identification (such as date/ time of manufacture)
- A rolled-in mark on all AS/NZS 3679.1 product that is at least 150mm deep, identifying the manufacturer and also that it is produced to this Australian Standard
- A label on each bar of AS/NZS 3679.2 product identifying the manufacturer, unique identifier, grade and section.



1. AS/NZS 1163 Hollow Sections marking 2. Rolled-in mark on AS/NZS 3679.1 Structural Products 3. AS/NZS 3679.2 Welded Product marking 4. OneSteel stencil marking (not mandatory)

How can I get compliant product?

When ordering your steel, request that a test certificate for the product is supplied with the order. When you take delivery of your steel, check the test certificates match the products you have received.

This is facilitated by the mandatory markings on the steel. Use the checklist opposite to ensure the test certificate contains all the mandatory requirements. Alternatively, simply ensure you specify and get OneSteel product.

AS/NZS 1163:2009

- OneSteel Australian Tube Mills are marking "AUSTRALIAN TUBE MILLS" and related traceability identifiers on ex-mill lengths of tube to identify that it is produced by OneSteel as per the requirements of **AS/NZS 1163:2009**.
- The easiest way to ensure that your steel complies with **AS/NZS 1163:2009** is to look for "AUSTRALIAN TUBE MILLS" on your tubular product.

AS/NZS 3679.1:2010

- OneSteel has rolled into a range of hot-rolled steel sections "one AS" to identify that it is produced by OneSteel to **AS/NZS 3679.1:2010**.
- Look for the rolled-in mark on hot-rolled sections that are 150 mm or greater to indicate the product is manufactured to meet **AS/NZS 3679.1:2010**.

AS/NZS 3679.2:2010

- Look for the label that identifies that the steel is supplied by OneSteel.



ACRS and Third Party Certification

OneSteel manufactures a comprehensive range of steel sections to AS/NZS 1163, AS/NZS 3679.1 and AS/NZS 3679.2 that are available with test certificates and ACRS third party certification.

Third party certification involves a qualified third party who assesses a manufacturer's capability to consistently manufacture a product to a particular Australian Standard.

The Australian Certification Authority for Reinforcing Steels (ACRS) has been operating to ensure compliance of reinforcing steels to Australian Standards for over 10 years and have recently extended their field of certification to include steel sections manufactured to AS/NZS 1163:2009, AS/NZS 3679.1, and AS/NZS 3679.2.

Continuing surveillance of the manufacturer's product and annual assessments of their mills provide reassurance of the product and test certificates provided by the manufacturer.

Most developers, designers and builders will already utilise the Building Code of Australia and Australian Standards, but ensuring products meet the Australian Standard by requesting a test certificate for the steel ordered will serve to reduce the risk of non-compliance. Specifying that the steel be ACRS certified will provide further reassurance.



How can I get more information?

- In-house presentations with further details can be requested from OneSteel Manufacturing.
- For further information, please contact:

W: www.buildwithstandards.com.au **T:** 1800 1 STEEL (1800 178335)

E: onesteeldirect@onesteel.com

Compliance with AS/NZS 1163:2009 and AS/NZS 3679.1:2010

The Test Certificate

Australian Standards AS/NZS 1163:2009 and AS/NZS 3679.1:2010 include requirements for both the content and provision of Test Certificates.

To meet these Australian Standards there are **mandatory** requirements for:

- Specific minimum information on Test Certificates
- Testing to be performed by laboratories with third party accreditation from a signatory to International Laboratories Accreditation Cooperation (ILAC) such as NATA.

The Test Certificate:

A Test Certificate that complies with AS/NZS 1163:2009, and AS/NZS 3679.1:2010 must contain all items on the following checklist, written in English and alpha numeric characters:

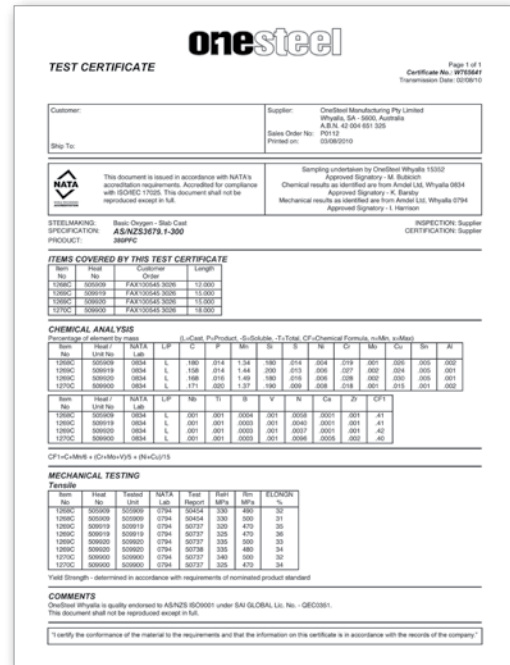
- Manufacturer's, supplier's and testing authority's name
- Test Certificate number and test number
- The date
- Product, testing specification and grade, e.g. AS/NZS 3679.1-350 or AS/NZS 1163-C450L0
- Product designation e.g. 530UB82.0 or product dimension and size, e.g. 200x100x5.0 RHS
- Product steelmaking process, e.g. basic oxygen-slab cast
- Length, bundle, pack or unique identifier to which the Test Certificate applies
- Heat number
- Mechanical properties:

| | | | |
|---------------|------------------|-------------------------|--------------|
| Tensile tests | Yield stress MPa | Tensile strength in MPa | % elongation |
|---------------|------------------|-------------------------|--------------|

- Impact test results at the specified test temperature only for low temperature (LO) and seismic (SO) grades (not required for 300PLUS or 350 Grade).
- Chemical analysis type, e.g. cast analysis 'L' or product 'P'
- Chemical composition with ALL the following listed:

| | | |
|-----------------|-------------------------|---------------------------------|
| Carbon (C) | Phosphorus (P) | Manganese (Mn) |
| Silicon (Si) | Sulphur (S) | Chromium (Cr) |
| Molybdenum (Mo) | Vanadium (V) | Nickel (Ni) |
| Titanium (Ti) | Niobium (Nb) | Copper (Cu) |
| Aluminium (Al) | Carbon equivalence (CE) | Any element intentionally added |

- Additional tests agreed between the purchaser and the manufacturer
- Statement acknowledging material being supplied in accordance with items above
- A third party accrediting testing body, recognised by ILAC (MRA) e.g. NATA accredited laboratory
- Signatory from manufacturer, supplier and testing authority attesting to items above.



The Test Certificate above, contains all required information as indicated by the checklist opposite.



REDUCE YOUR RISK

SPECIFYING AND USING ONESTEEL PRODUCT REDUCES YOUR RISK.

OneSteel supplies a comprehensive range of steel sections to Australian Standards. These products are available with test certificates and ACRS third party certification.

The test certificates demonstrate that the product conforms to the requirements of the Australian Standards and ACRS certification is confirmation from an independent authority that OneSteel manufactures products to the Australian Standards, and does so consistently.

Why take the risk, insist on OneSteel product.



Independent Third Party
Australian Standards
Certification & Verification of
Reinforcing, Prestressing &
Structural Steels
Compliance



To find out more about how OneSteel product reduces your risk, visit www.buildwithstandards.com.au

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