



TRUE INNER STRENGTH
YOU CAN **TRUST**

TrueCore[®]



True inner strength behind every great build

A high performance structural system is fundamental to the long-term stability, integrity and serviceability of any building. Achieving reliable performance requires the right combination of material selection, engineering design, detailing and construction quality to ensure the structure performs as intended throughout its service life.

Manufactured by BlueScope, TRUECORE® steel is a high-strength steel solution engineered for lightweight truss and framing applications. It is designed to deliver consistent mechanical performance, durability and long-term structural reliability, giving builders, fabricators and engineers greater confidence in truss and framing system performance over time.

Advantages of TRUECORE® steel

TRUECORE® steel offers a combination of structural performance and durability advantages for truss and framing applications:

- **Lightweight Strength**

Light in weight, strong in performance for efficient fabrication, handling and installation

- **100% Termite and Borer Proof**

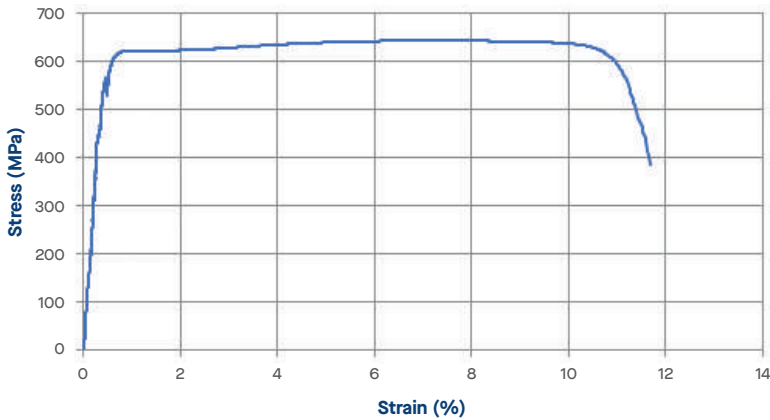
The steel in TRUECORE® steel is resistant to termites and borers, helping maintain structural integrity over time.

- **Non-combustible**

Minimise fire risk in building design as a non-combustible material.

Guaranteed G550 steel strength for reliable structural performance

The mechanical properties of structural steel are critical to ensuring building integrity throughout its service life. TRUECORE® steel is manufactured to a guaranteed minimum yield strength of 550 MPa (G550), providing consistent structural performance and allowing engineers to design with confidence.



Note: The above TRUECORE® steel stress-strain curves shown are derived from production records. Actual values may vary between production batches.



Innovative Aluminium-Zinc alloy coating for long-lasting corrosion protection

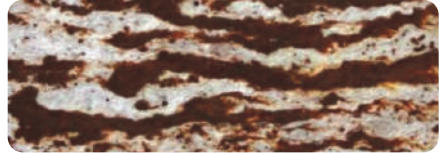
TRUECORE® steel is crafted with an innovative Aluminium-Zinc alloy coating system designed to provide long-lasting corrosion protection.

In salt spray testing*, TRUECORE® steel demonstrates excellent corrosion resistance compared to other coated steel (GI). While other GI samples show significant coating loss and visible rust formation, TRUECORE® steel remains in good condition.

TRUECORE® steel
at 500 hours



Other coated steel (GI)
at 500 hours



After 500 hours of accelerated salt spray testing, TRUECORE® steel remains protected, while other GI sample shows visible signs of corrosion.**

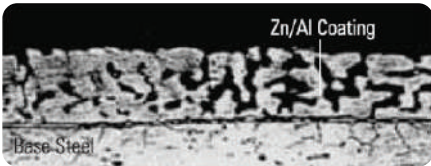
Source: SIRIM Test Report (Ref: 2007KL0045 and 2008KL1064)

This performance is achieved through the Aluminium-Zinc (type AZ) alloy coating structure:

- Zinc-rich areas provide sacrificial protection
- Aluminium-rich areas form a durable protective barrier
- Combined protection slows oxidation and corrosion progression

Type AZ Coating

Sacrificial & Barrier Protection

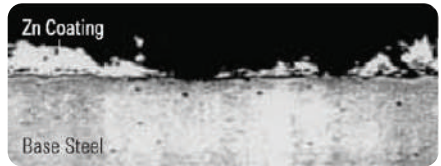


Microscopic sectional view of
Type AZ coating after weathering

In the early stage of weathering, the Zinc-rich areas corrode preferentially, providing sacrificial protection to the base steel. Over time, Zinc corrosion products combine with the Aluminium-rich areas to form a protective barrier that helps inhibit further corrosion.**

Type Z Coating

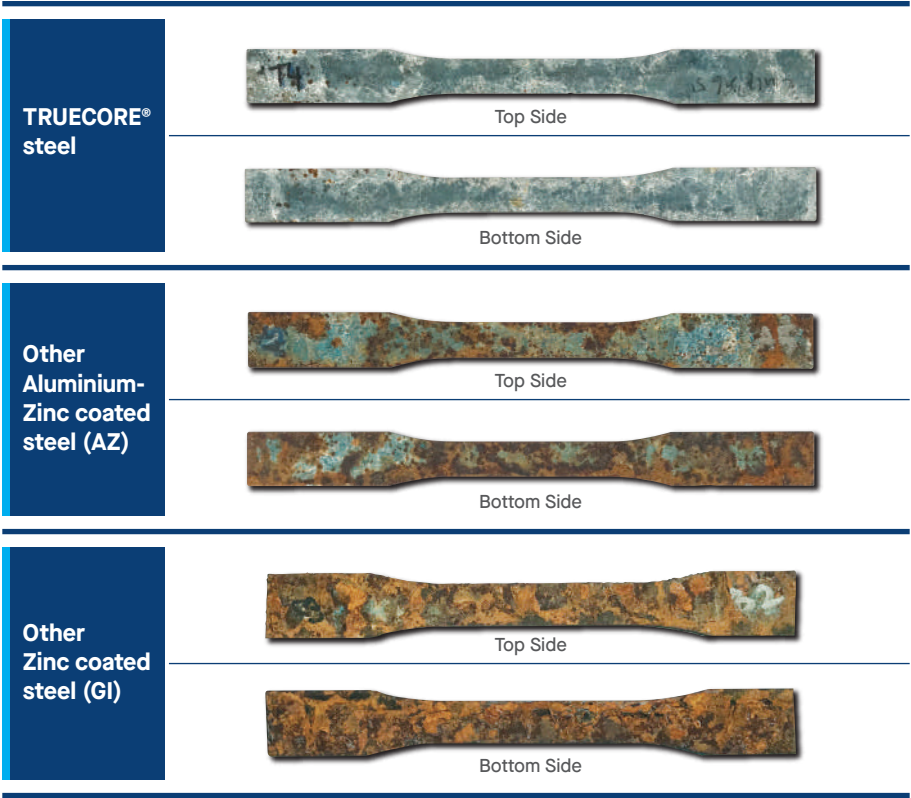
Sacrificial Protection



Microscopic sectional view of
Type Z coating after weathering

The Zinc coating offers strong sacrificial protection in the early stages. However, once the Zinc coating is fully consumed, the base steel underneath is left exposed, allowing corrosion to spread across the entire sheet.**

The following images showed different degrees of red rust after 750 hours of salt spray test.*



TRUECORE® steel shows minimal signs of corrosion while other coated steel products, such as other Aluminium-Zinc (AZ), Galvanised Iron (GI) show signs of red rust.**

Source: SIRIM Test Report (Ref: 2021CE0061 and 2021CE0062) after 750 hours Salt Spray Test (ASTM B117)

***Note:** Salt spray test is an accelerated laboratory test used for quick assessment of corrosion performance and does not fully represent real-world conditions. Actual performance may vary depending on environmental and operating conditions.

****Disclaimer:** The comparison results only applied to this particular product and do not represent all products available in the market. The images of the tested steel samples in this brochure have been digitally adjusted to represent the actual appearance of the steel plates as accurate as possible.

Proven long-term performance in severe marine environments

Long-term exposure testing has demonstrated the durability of TRUECORE® steel in some of the harshest coastal environments.



Corrosion performance of TRUECORE® steel compared with a Z275 generic coated steel (GI) sample after **9 years of exposure at a severe marine site under unwashed area.***

- **Test Location** : Bellambi Point, Wollongong, Australia
- **Distance from Breaking Surf** : 50 metres
- **Test Standard** : AS/NZS 1580.457.1
- **Environment Classification** : Category C4 (ISO 9223)

Results from this severe marine environment demonstrate the long-term corrosion resistance and durability of TRUECORE® steel under aggressive coastal conditions.

Source: BlueScope Case Studies

***Disclaimer:** The comparison results only applied to this particular product and do not represent all products available in the market. The images of the tested steel samples in this brochure have been digitally adjusted to represent the actual appearance of the steel plates as accurate as possible.

Product authenticity and traceability

Genuine TRUECORE® steel carries branding text including the TRUECORE® steel brand name, production date and time, for clear product identification.

TRUECORE(R) AZ150 G550 steel made by BlueScope hh:mm dd:mm:yy II

TRUECORE(R) AZ200 G550 steel made by BlueScope hh:mm dd:mm:yy II

Actual branding text on steel

These distinctive markings help verify BlueScope product authenticity and support traceability, giving builders, fabricators and specifiers greater confidence in the quality and integrity of the material they are specifying and using.

Durability and warranty assurance

Building structures that achieve long-term serviceability require reliable materials with proven performance characteristics. TRUECORE® steel is designed to support long-term structural durability:

- Up to 50-year warranty* against corrosion causing structural failure (eligible projects)
- 100% termite and borer proof
- Non-combustible material
- High-strength structural steel (G550)
- Available in AZ150 and AZ200 coating mass options, enabling specification for different environmental exposure conditions, including demanding or corrosive environments.

*Warranty terms & conditions apply.



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Certified to AS1387: 2001
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**Scan now for more information
on TRUECORE® steel**

The information contained in this brochure is of a general nature only, and has not been prepared with your specific needs in mind. You should always obtain specialist advice to ensure that any materials, approaches and techniques referred to in this brochure meet your specific requirements.

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