



# TrueCore<sup>®</sup>

STRAIGHT & TRUE  
THE STRENGTH  
BEHIND STRONG AND  
RELIABLE STRUCTURES





# ABOUT BLUESCOPE

BlueScope's heritage of manufacturing steel products and innovations span more than 130 years and we take pride in the quality and performance of our steel solutions. All BlueScope products are tested by our technical experts under the most extreme outdoor conditions during the R&D stage to ensure that they last beyond what we promise.

Backed by Australian technology, our steel solutions are manufactured in accordance with BlueScope's stringent manufacturing guidelines, in compliance with ISO 9001 and ISO 14001 accreditations. This is BlueScope's commitment on product quality and performance. It also simply means you can be confident and assured that your investment is well protected.

# Assured Integrity, true strength and design versatility for all your steel structures with TRUECORE® steel

The structure is more than just one of the many stages in the building process. With the right choice of material, correct design and careful craftsmanship, the truss and framing plays an integral part in ensuring the building structure look straight and stay strong to last for generations. This is why more and more builders choose TRUECORE® steel as the preferred material for a strong structure.

TRUECORE® steel offers many unprecedented benefits compared to other ordinary truss and framing materials:

- Efficiency: the ease of use and prefabrication flexibility help to expedite the construction process.
- Durability: steel is 100% termite and borer proof.
- Safety: TRUECORE® steel is non-combustible, hence does not contribute to house fire.



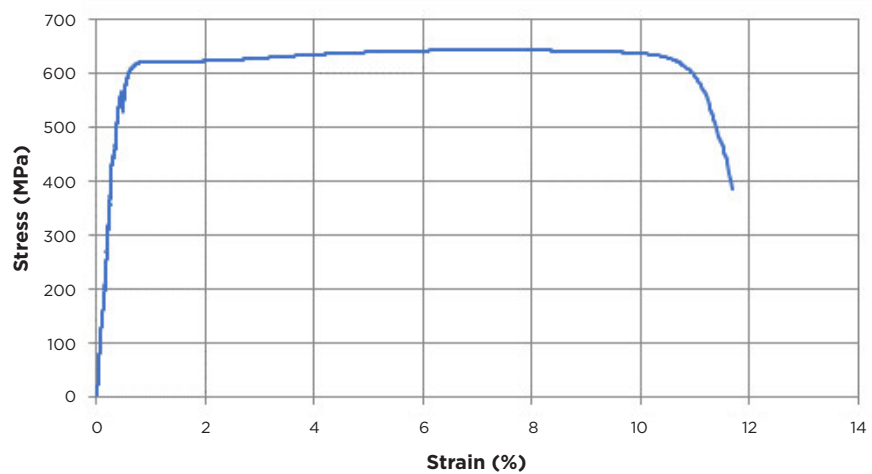
## Guaranteed Minimum Yield Strength of 550MPa

The mechanical properties of TRUECORE® steel is a critical factor to ensure structural integrity of a building throughout its lifespan.

TRUECORE® steel come with a guaranteed minimum yield strength of 550MPa, which is commonly referred to as G550 steel grade.

Below shows a stress-strain curve<sup>1</sup> of TRUECORE® steel from a tensile test quality check conducted by BlueScope.

With this minimum yield strength guarantee, it can provide consistent, robust support for your building structures, and engineering design optimization of the structure can be done more reliably.



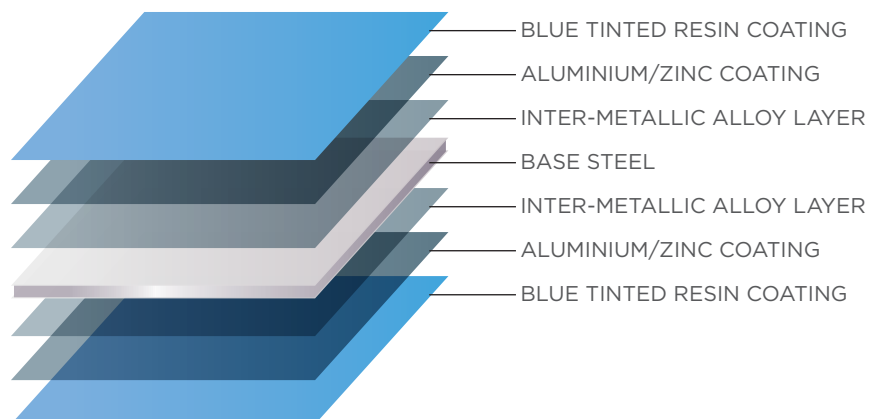
Note 1: TRUECORE® steel's stress-strain curve retrieved from production records and it may vary from batch to batch of products.

TRUECORE® steel produced by BlueScope is guaranteed to meet the G550 steel grade requirements.

## BlueScope's Coating Technology

Produced using BlueScope's proprietary metallic coating technology, TRUECORE® steel delivers superior corrosion resistance performance compared to other generic alternatives (GI) under varied conditions.

TRUECORE® steel's alloy coating comprises of a proprietary ratio: 55% Aluminium, 43.5% Zinc and 1.5% Silicon, with a consistent coating of minimum 150g/m<sup>2</sup> coating mass by triple spot test. These are the core to its superior corrosion resistance performance. A higher coating mass of 200g/m<sup>2</sup> is also available.



## Accelerated Corrosion Test in Salt Spray Chamber

TRUECORE® steel has performed more superior in the Salt Spray Chamber: a generic alternatives (GI) of a Z180 sample shows severe loss of coating mass and consequent red rusting on the steel substrate, while TRUECORE® steel remains in good condition.

The zinc-rich area provides excellent sacrificial protection while the aluminium-rich area serves as a durable barrier against further oxidation, hence an overall much better performance against rust and corrosion than generic alternatives (GI).



TRUECORE® steel at 500 hours



Generic Alternatives (GI) at 500 hours

Samples conditions shown above are after respective samples have gone through 500 hours neutral salt spray test.

Source: SIRIM Test Report (Ref: 2007KL0045 and 2008KL1064). Salt spray test is an accelerated laboratory test used for quick assessment of corrosion performance which does not mimic real-world wet & dry environmental conditions hence can't be used to predict actual product performance.

## Excellent Corrosion Resistance

TRUECORE® steel was placed under a roof alongside a generic alternative (GI) of a Z275 sample in a severe marine test site to simulate its actual application conditions.

**9 years at severe marine test site\* (unwashed)**



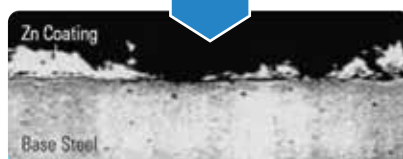
TRUECORE® steel



Generic Alternatives (GI)



Microscopic view of TRUECORE® steel



Microscopic view of Generic Alternatives (GI)

Source: \*Bellambi Point, Wollongong, Australia - 50m from breaking surf marine (AS/NZS 1580.457.1), classified as Category C4 environment under ISO 9223 standard.

\*Images used are for reference only

## Branding Text for Assurance of Product Authenticity and Traceability

To be assured that your TRUECORE® steel is a genuine product, look for both the side branding text and sinusoidal branding text printed on the reverse side of the sheet. TRUECORE® steel also comes with a distinctively unique blue tinted finishing at both sides of the steel surface. These are two important visual identification keys to ascertain TRUECORE® steel authenticity.



TRUECORE®(R) AZ150 6550 steel made by BlueScope h:mm dd:month yy ll

Actual branding text on steel



TrueCore®

Exclusive BlueScope blue tinted resin appearance with side branding text and sinusoidal branding text which marks the authenticity of the product.



Other brands

Other brands with blue tinted appearance with no branding text

\*Displayed image is for reference only



## Durability to Last for Generations

Building structures that stand the test of time requires commitment, experience and most importantly, choosing the right material from the very beginning:

- ✓ TRUECORE® steel offers you a reassuring 50 years of warranty\* due to corrosion against structural failure for the eligible project\*
- ✓ TRUECORE® steel is 100% termite and borer proof
- ✓ TRUECORE® steel is non-combustible hence does not contribute to house fire

\*Warranty terms & conditions apply



For product identification and originality, please check the reverse side of the sheet for the following branding text.

TRUECORE® AZ150 G550 steel made by BlueScope h h m m d d m o m y y l l

TRUECORE® AZ200 G550 steel made by BlueScope h h m m d d m o m y y l l



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Certification No. IPC0000316



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