Colorbond®

Zincalume®

BlueScope

LONG LASTING BEAUTY

With 4 breakthrough technologies, COLORBOND® steel provides long lasting beauty, to ensure your project remains a work of art.

Activate™
The Unique 4 Phases Alloy-coated Technology In The Market

Clean
Dirt Stain Resistant Technology

Thermatech®
Solar Reflectance Technology

SUPERIOR DURABLE PAINT SYSTEM
For Long Lasting Colour Stability

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THE UNIQUE 4 PHASES

ALLOY-COATED TECHNOLOGY IN THE MARKET

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THE UNIQUE 4 PHASES ALLOY-COATED TECHNOLOGY IN THE MARKET

THE NEXT GENERATION IS HERE...

20+ years
of research & development

AU$100+ million
of R&D investment

18,000+ tested and exposed panels in laboratory and real world environment

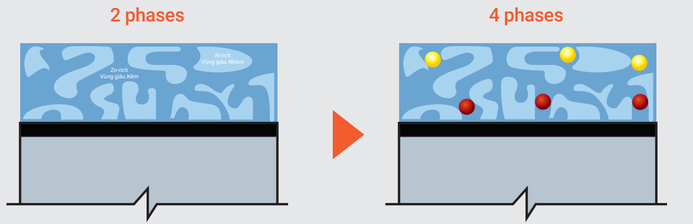
20+ patents for BlueScope's industry leading alloy coating structure and its manufacturing process

BlueScope is proud to present Activate™ - the breakthrough technology, developed to withstand severe environments. The new technology has set an industry benchmark for alloy-coated steel technology in the market with the new generation COLORBOND® and ZINCALUME® steels.

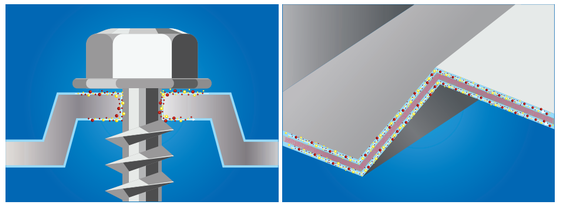
ACTIVATE™ TECHNOLOGY
THE MICROSTRUCTURE OF 4 PHASES AND
SELF-SEALING PROPERTIES FOR SUPERIOR CORROSION RESISTANCE

The key factor behind BlueScope's patented ACTIVATE™ technology lies in the unique composition and microstructure of 4 phases including Aluminium - Zinc and 2 special Magnesium compounds.

Activate™

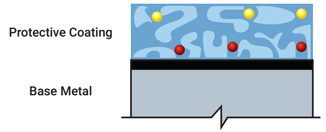


With the unique composition and microstructure of the 4 phases, the new generation COLORBOND® and ZINCALUME® steels create a self-sealing effect which greatly improves corrosion resistance at cut edges, screw holes, and scratches. This mechanism protects projects in severe environments such as marine and polluted industrial sites, enabling them to withstand the test of time.

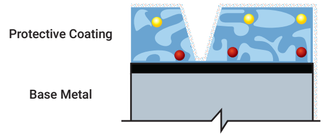


ACTIVATE™ technology
greatly improves corrosion resistance
at cut edges, screw holes & scratches

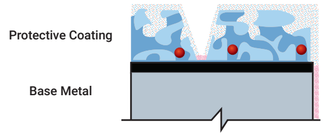
HOW ACTIVATE™ TECHNOLOGY WORKS



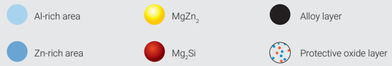
The active metallic coating provides superior corrosion resistance for the coated metal via two strategically positioned magnesium compounds.



The first magnesium compound is activated at the start of weathering. In the presence of moisture, a thin zinc aluminium oxide layer forms on the surface. The magnesium compound ($MgZn_2$) makes the oxide layer more stable and less permeable, providing a better barrier against corrosion, especially at cut edges and scratched areas.



Deeper within the coating, the second magnesium compound (Mg_2Si) provides the additional barrier, preventing corrosion from reaching the base metal. The process activates the aluminium and reduces coating loss for longer, ensuring long-term protection.



Careful process control ensures that most of the magnesium silicide is positioned towards the bottom portion of the coating layer (close to the base steel), while most of the magnesium-zinc is positioned towards the top portion of the coating layer. This positioning is an important factor in enabling the improved corrosion resistance of the alloy coating with Activate™ technology.

WITHSTANDING THE TEST OF TIME

COMPREHENSIVE TESTING OVER 20 YEARS

To ensure the new generation of COLORBOND® and ZINCALUME® steels with Activate™ technology live up to the highest expectations in durability, BlueScope conducted a comprehensive testing programme that included accelerated laboratory corrosion tests, as well as real-world outdoor exposure tests.

Over a 20-year period, more than 8,000 panels have undergone Q-Fog cyclic testing and salt spray testing in laboratories. A further 10,000 panels have been tested in 22 different exposure sites in Australia and around the world.

Accelerated Testing (>8,000 panels)

Outdoor assessment sites
(> 10,000 panels spread over 22 sites)

Test Huts (5)

Building Applications (~50)

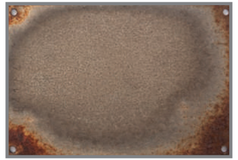
COMPREHENSIVE TESTING OVER 20 YEARS

Additionally, during the product development stage, 50 building sites comprising a wide range of applications, as well as 5 purpose-built test structures, have been tested in real-world conditions and severe marine environment.

The results were independently verified by the internationally recognised French Corrosion Institute (FCI), proving that COLORBOND® steel is highly durable, especially at the cut edges, and more resistant to scratching and scuffing during construction.

Activate™ shows superior performance to previous generation AZ technology after 22 years at Bellambi Point, The Surf Marine Site.

Exposed panels at Bellambi Point, Wollongong, Australia



Al-Zn alloy-coated ZINCALUME® steel

The new generation of ZINCALUME® steel with Activate™ Technology

THE SUPERIOR DURABLE PAINT SYSTEM

LONG LASTING COLOUR

Durable and hard-wearing, COLORBOND® pre-painted steel offer superior delamination, chalking, stain resistance and gloss retention even under harsh weather conditions. The advanced paint technology in COLORBOND® provides a durable, baked-on paint finish that resist peeling, fading, chipping and cracking to ensure long-lasting vivid colour.

ACHIEVING SUPERIOR WEATHERING PERFORMANCE THROUGH INNOVATION

BlueScope utilizes optimum paint formulation and pigment blends to provide excellent long-term colour stability for COLORBOND® products. The proprietary paint system is the result of extensive R&D testing, including actual field exposure testing.

It is proven that COLORBOND®'s paint system provides superior durability against weathering and UV degradation, when compared with other pre-painted steel.

Alternative paint system steel - example

COLORBOND® steel with Activate™ technology

Exposed to weathering for 6 years at Rockhampton (severe UV environment)

Results are based on test of one sample

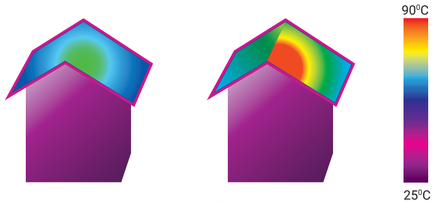
Thermatech® TECHNOLOGY

LESS HEAT, MORE COMFORT

BlueScope's Thermatech® solar reflectance technology lowers the surface temperature of metals by absorbing less heat from the sun. With Thermatech® Technology, COLORBOND® steel delivers exceptional thermal performance, thus providing superior comfort all year round while reducing the dependence on energy-consuming air-conditioning to overcome the Urban Heat Island (UHI) effect.

Green building rating tools such as the Leadership in Energy and Environment Design (LEED) encourages use of materials with high SRI values to mitigate the UHI effect. COLORBOND® steel with Thermatech® is able to provide higher SRI value thus complying to the green building requirements.

** Solar reflectance index (SRI) is a numerical value used to represent a constructed surface's ability to reflect solar heat. A higher SRI value indicates a roof whose surface temperature is lower due to the higher solar reflectance.*



COLORBOND® steel with Thermatech® Technology

Conventional pre-painted steel

BENEFIT AT A GLANCE

- Thermatech® solar reflectance technology acts an added form of insulation in hot weather, making it easier for air-conditioning to keep buildings cool.
- Reduce annual cooling energy consumption by up to 15%*.
- Lower peak roof temperature by up to 6°C*.
- Greater comfort while using less energy, which helps to reduce cost and is more environmentally friendly.

** Depending on level of insulation, colour, building shape and function.*

CLEAN TECHNOLOGY

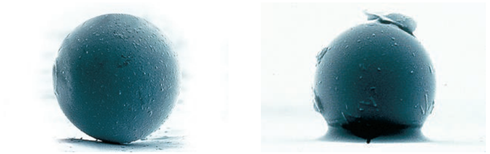
THE BEST DEFENCE AGAINST TROPICAL STAINING

In environments exposed to heat and humidity, airborne particles settle on conventional pre-painted steel surfaces, resulting in dark, unsightly stains that give buildings a dirty, aged appearance.

Incorporated into the COLORBOND® paint system, BlueScope's Clean Technology prevents dirt from bonding to the surfaces. As a result, particles remain "loose" and wash away during rainfall, resulting in a cleaner surface.

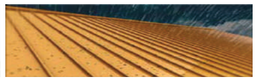
Dirt does not bond onto COLORBOND® steel with Clean Technology

Dirt bonds to conventional pre-painted steel



Magnified image of dirt particle

Dark & unsightly dirt staining on the building's surface cannot be removed



Dirt particles washed off easily after rain

Colorbond®

COLORBOND® STEEL LONG LASTING BEAUTY

COLORBOND® steel is a pre-painted premium product of BlueScope, produced by continuous hot-dip metal coating line complying to AS 1397-2011 (Substrate) and AS/NZS 2728-2013 (Paint Coating) standard.

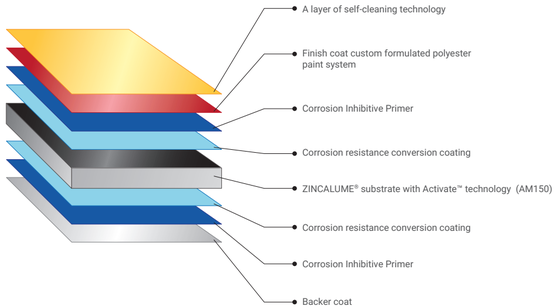
Building on its legacy of innovation, integrating 4 breakthrough technologies, COLORBOND® steel continues to bring art to life through the power of cutting-edge science to provide your project with long lasting beauty.

COLORBOND®'S PRODUCT RANGES

Colorbond® ULTRA

New generation COLORBOND® ULTRA steel with Activate™ technology is an excellent choice for roofs and walls, and provide better protection against extreme environment.

Integrated with Thermatech® technology, Clean technology, and break-through Activate™ technology with 4 phases for superior corrosion resistance, COLORBOND® ULTRA steel is the most suitable building material for severe marine and harsh industrial environments.



SUPERIOR ADVANTAGES

Activate™

COLORBOND® ULTRA steel with Activate™ technology (AM150):
- Improves surface corrosion resistance.
- Enhances anti-corrosion of cut edges in both washed and unwashed applications.

Superior paint performance that provides the ability to withstand colour fading.

Proprietary Clean Technology provides resistance against dirt staining.

Thermatech® technology reduces roof temperature by up to 6^{o}C**, reducing annual cooling energy consumption by up to 15%**.

** Depending on level of insulation, colour, building shape and its function.*

COLORBOND®'S PRODUCT RANGES

Colorbond® Custom

CREATE YOUR OWN COLORBOND® STEEL

For projects that need customized solutions, ask for COLORBOND® Custom steel. With a choice of substrates, coating mass, paint systems, colours and finishing, customers have the freedom to customise a COLORBOND® steel product to suit their unique needs.

Coating mass

Choose Activate™ technology coating mass with nominal thickness thinner than new generation COLORBOND® ULTRA AM150.

Colours

Pick from our special colours, Metallic or Pearlescent range, for a more distinct look.

Paint system

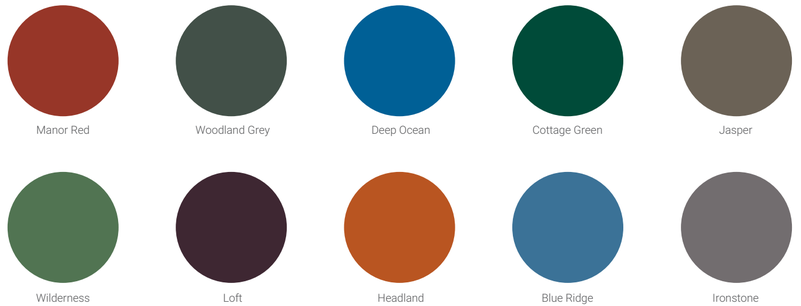
Latest generation polymer technology of paint system

COLORBOND® steel uses a superior durability premium paint system with pigments specially selected for high durability. Tested for UV resistance under accelerated tests (ASTM G154) and outdoor field exposure, it is proven that COLORBOND®'s paint system provides superior durability against weathering and UV degradation, when compared with other pre-painted steel.

PVDF paint system

Due to excellent colour and gloss retention, COLORBOND® steel with PVDF paint system is the perfect material for prestigious roofing, walling, architectural panels and building accessories that are exposed to tough weather conditions. COLORBOND® steel uses proprietary PVDF formulation which ensures excellent colour performance.

STANDARD COLOUR CHART



NOTE: The COLORBOND® steel colours shown in the catalogue have been reproduced to represent actual product colours as accurately as possible. However, we recommend you check the chosen colour against actual samples of the product before purchasing as varying light conditions and limitations of printing affect colour tones.

Zincalume®

OVER 40 YEARS, ZINCALUME® STEEL KEEPS GETTING BETTER

Since its launch in 1976, ZINCALUME® steel has emerged as a trusted brand and it is also acknowledged in the industry as one of the best zinc-aluminium alloy-coated steel products available. With Activate™ technology, BlueScope's continuous product innovation ensures ZINCALUME® steel not only outperforms galvanized steel but also remains superior against generic alloy-coated products.

ACTIVATE™ TECHNOLOGY FOR SUPERIOR CORROSION RESISTANCE

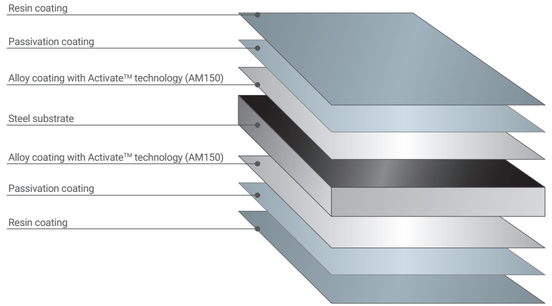
ZINCALUME® and ZINCALUME® ULTRA steels with Activate™ technology (AM150):
- Improves surface corrosion resistance.
- Enhances anti-corrosion of edges in both washed and unwashed applications.
- Offers longer warranty periods of up to 36 years*. Warranties are also applicable to projects close to the marine environment*.

** Warranty terms and conditions apply.*

LOOK NEWER FOR LONGER WITH ADVANCED RESIN COATING

ZINCALUME® steel with distinct surface has a special clear resin coating on its surface which provides better resistance to dirt marks, moisture and manual handling. The clear resin film on the surface of ZINCALUME® steel acts as a lubricant during roll forming operations.

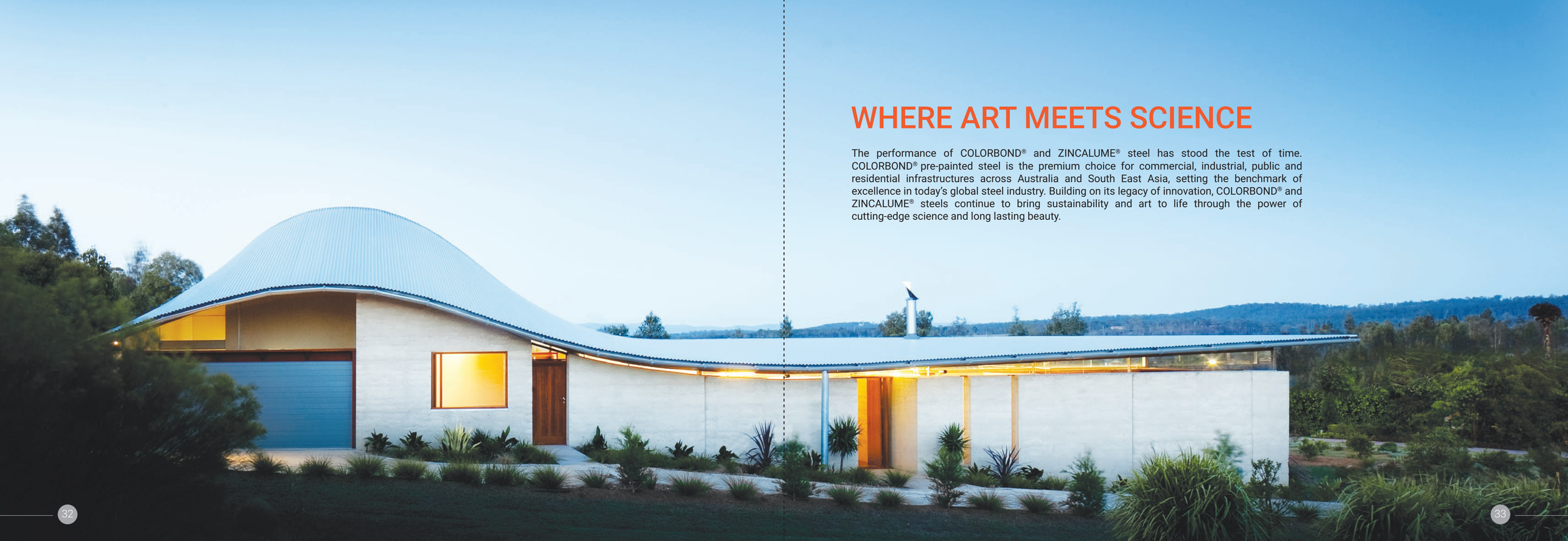
ZINCALUME® steel will look newer and also maintains its distinctive metallic appearance for a longer period of time.



* Please visit our website **www.nsbluescope.com/vn** for Product technical data sheet or contact our local representative for more information.

WHERE ART MEETS SCIENCE

The performance of COLORBOND® and ZINCALUME® steel has stood the test of time. COLORBOND® pre-painted steel is the premium choice for commercial, industrial, public and residential infrastructures across Australia and South East Asia, setting the benchmark of excellence in today's global steel industry. Building on its legacy of innovation, COLORBOND® and ZINCALUME® steels continue to bring sustainability and art to life through the power of cutting-edge science and long lasting beauty.



BlueScope

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SINGAPORE GREEN BUILDING PRODUCT SGBC VERY GOOD

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