

**ENHANCED PERFORMANCE  
7 NEW COLOURS**

**September 2005**  
(Replaces September 2003)

**COLORSTEEL® ENDURA™**

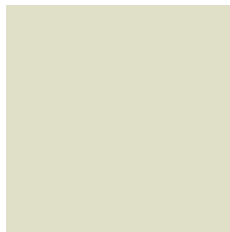
**COLOUR CHART**



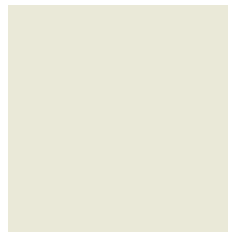
**COLORSTEEL® Endura™**  
COLOUR FOR THE FUTURE



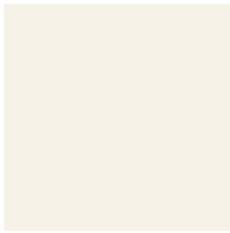
Desert Sand



Bone White



Titania



Cloud



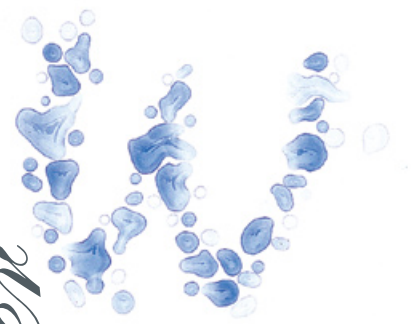
Smooth Cream



*Sand*



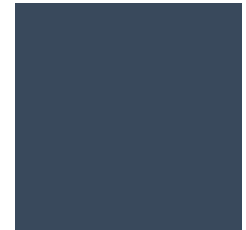
*Water*



Storm Blue



New Denim Blue



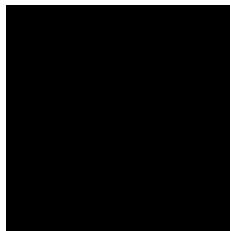
Pacific Blue



Azure



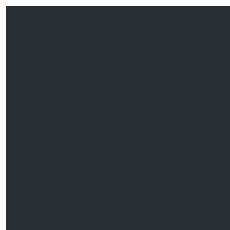
*Stone*



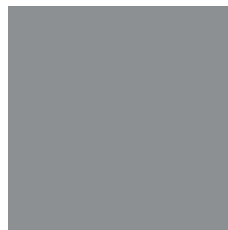
Ebony



Ironsand



Grey Friars



Sandstone Grey



Stone



Gull Grey

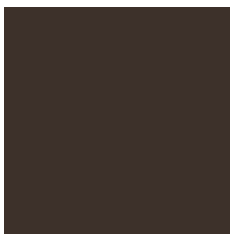
## THE NATURAL CHOICE

The hues of nature have determined our response to colour. Red based tones remind us of sunshine, earth and fire – so we think of them as warm and inviting. Blues are considered cool and refreshing, greens are restful and reminiscent of leafy glades and luxuriant growth. Sand spans the colours of the seaside to the richer desert hues. There is also the comfort of the stone colours that offer security and strength.

To our personal preferences we add the ingredients of environment, situation and interaction of design when making a new roof colour choice. A COLORSTEEL® ENDURA™ prepainted steel roof reflects these hues of nature.

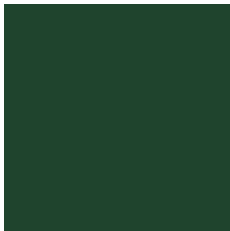
To the steel core of each COLORSTEEL® ENDURA™ prepainted steel sheet, a remarkable coating called ZINCALUME® has been applied. The zinc and aluminium in this ZINCALUME® steel coating combine together to provide both stable corrosion protection overall and galvanic protection on cut edges. In conjunction with the primer and top paint coats, this means the investment in your new roof will be assured for many years to come.

COLORSTEEL® ENDURA™ prepainted steel products can be used in all moderate to severe environmental conditions within New Zealand. For those very exposed coastal conditions or in very severe industrial or geothermal areas, please seek advice from your steel roofing supplier or New Zealand Steel.

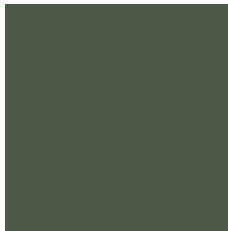


Karaka

Colours shown in this brochure are as close as normal printing processes allow and should be viewed under exterior lighting conditions. Contact your roofing supplier to view actual COLORSTEEL® prepainted steel samples to confirm the exact colour.



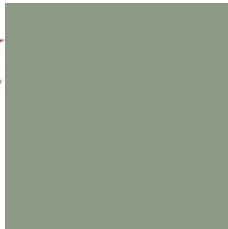
Permanent Green



Rivergum



Lichen



Mist Green

*Earth*



Terracotta



Scoria



Pioneer Red



Lignite

**COLORSTEEL® Endura™**  
COLOUR FOR THE FUTURE

## MAINTENANCE RECOMMENDATIONS FOR COLORSTEEL® ENDURA™ PRODUCTS USED FOR ROOFING AND WALL CLADDING

	ENVIRONMENT		
	Moderate ISO Category 3	Severe ISO Category 4	Very Severe ISO Category 5
<b>Roof</b>	Rain washing	Rain washing	Not recommended
<b>Wall Cladding</b>	Rain washing plus manual washing every year	Rain washing plus manual washing every 6 months	Not recommended
<b>Unwashed and High Risk Areas</b>	Manual washing every 6 months	Manual washing every 3 months	Not recommended

**Note:** High risk areas include around flues and extractor vents, under television aerials and trees and sites prone to mould, lichen, bird droppings or debris.



## ENDURA™ PRODUCT DESCRIPTION

The COLORSTEEL® ENDURA™ paint system consists of a ZINCALUME® steel substrate to which a prepainted finish system is applied. The system is designed to provide protection against corrosion in areas where moderate to severe environmental conditions are experienced. COLORSTEEL® ENDURA™ product is suitable for a wide range of rollformed roof and wall claddings, rainwater accessories and general building products. The COLORSTEEL® ENDURA™ paint system will exceed the service life of most traditional post painted systems.

## DURABILITY

When rollformed, installed and maintained in accordance with New Zealand Steel's recommendations, COLORSTEEL® ENDURA™ prepainted steel is warranted by New Zealand Steel to meet the performance requirements of NZBC B2.3(c) for a 15 year durability when used for the manufacture of roof and wall claddings. COLORSTEEL® ENDURA™ products are expected to fade uniformly over the surface, the extent being no more than 8 Hunterlab units on the Delta E scale, and have a chalk rating of  $\leq 4$  (AS 1580 481.1.11, 1998) after 10 years exposure.

## LIMITATIONS OF USE

COLORSTEEL® ENDURA™ products are not recommended for use in very severe environments, i.e. within approximately 100m of breaking surf or corrosive industrial emissions. (Very severe marine environments are characterised by heavy salt deposits and the almost constant smell of salt spray in the air.) Refer to New Zealand Steel's Environmental Categories Guide for further information on the definition of corrosive environments. (For very severe environments, COLORSTEEL® MAXX™ material may be suitable). Before using COLORSTEEL® ENDURA™ products near sources of industrial pollution or in geothermal areas, consult the Technical Market Manager, New Zealand Steel.

COLORSTEEL® ENDURA™ products should not be used in the following applications.

- embedded in concrete
- in contact with permanently wet materials
- water tanks
- in contact with soil, bark or similar
- as concrete formwork
- in intensive animal shelters

Copper or brass pipes must not be allowed to discharge onto COLORSTEEL® prepainted steel products or be allowed to come into contact with them. The use of other materials in proximity to COLORSTEEL® prepainted steel products must be in accordance with the New Zealand Steel Specifiers and Builders Guide. Mixing of brands of prepainted material on the same building is not recommended by New Zealand Steel Limited.

The reaction between ZINCALUME® steel and lead flashings will degrade the ZINCALUME® steel material. Soft zinc or aluminium flashings should be used. Marking with lead pencils is not advised, and sealing washers should be low carbon non-conducting. Refer to the New Zealand Steel Installers Guide under the 'Marking, Cutting and Drilling' section.



## MAINTENANCE

Areas of COLORSTEEL® ENDURA™ not regularly washed with rain water, such as wall claddings, unwashed areas and areas of high risk, must be routinely washed to remove surface deposits to ensure satisfactory life is obtained from the product. Specific maintenance recommendations are given in the table on the opposite page. Check guttering and downpipes regularly and remove any debris which may lead to ponding or flooding. Always wear soft soled shoes when walking on COLORSTEEL® surfaces to avoid causing damage.

## WARRANTIES

For residential homes, New Zealand Steel warrants that, when used as a roofing product, COLORSTEEL® ENDURA™ prepainted steel will not flake, peel or excessively fade within 15 years and will not perforate through corrosion within 15 years in severe environments and 30 years in moderate and inland exposures. For commercial buildings such as schools and warehouses, refer to New Zealand Steel for details of commercial warranties.

## COMPOSITION

The COLORSTEEL® ENDURA™ substrate is steel strip, commonly 0.40mm or 0.55mm thick and coated with a 45% zinc, 55% aluminium alloy to a nominal coating mass of 150g/m<sup>2</sup> manufactured in accordance to AS1397:2001. A range of thicknesses, widths and strengths are available. Following pretreatment, a corrosion inhibitive primer, and top coat is applied to the outer surface and a corrosion inhibitive primer and a backer to the reverse side. These coatings are oven cured to provide colour and corrosion performance.

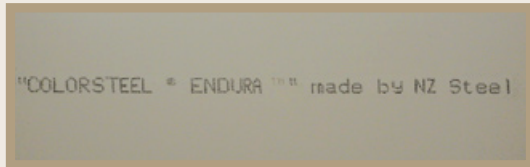


## APPEARANCE

COLORSTEEL® ENDURA™ products are available in a range of colours. The backer coat is AZ Backer.

## IDENTIFICATION

COLORSTEEL® ENDURA™ product is identified by a brand applied to the reverse surface, indicating product type and date of manufacture.



## INSTALLATION

Installation details for COLORSTEEL® ENDURA™ product are contained in the New Zealand Steel Installers Guide.

### FIXINGS:

- Aluminium and factory painted fixings are acceptable.
- Stainless steel, Monel or other copper alloy fixings **must not** be used.
- Lead-head nails **must not** be used.
- Fixings that meet AS3566 class 3 and 4 are acceptable.

### SEALING AND JOINING:

- Use only neutral-cure silicone rubber sealants.
- **Do not** use abrasive cutting wheels.
- **Do not** weld, braze or solder.

**Touch-up Paints** – should not be used, as air drying paints have different weathering characteristics to the COLORSTEEL® prepainted steel coating.

**Clean up** – all debris (particularly from roofing installation) must be removed from COLORSTEEL® ENDURA™ product surfaces at the end of each day's work. Take care not to damage the coating when removing sharp fixing debris.

**Gutter Protection** – Any gutter protection or leaf guard system, (or any other product), that traps water between the roof and product surfaces, thus restricting the coated steel's ability to dry, is not recommended and will invalidate the roof warranty

## EXTERNAL MOISTURE

COLORSTEEL® ENDURA™ roof cladding must be installed at a minimum of 3° or over the minimum pitch given for the profile by the profile manufacturer, whichever is greater. Factors likely to affect the resistance of COLORSTEEL® ENDURA™ prepainted steel to external moisture include the quality of the installation, the severity of the climate, roof configuration, material profile

and the design and execution of junctions between similar materials and other elements.

## SPREAD OF FIRE

COLORSTEEL® ENDURA™ prepainted steel comprises a combustible surface adhered to a noncombustible substrate. Used on roofs, it meets the requirements of NZBC C3/AS1 in all purpose groups. Refer to C3/AS1 Section 4.0 External Walls and Roofs which covers vertical and horizontal spread of fire.

## HAZARDOUS BUILDING MATERIALS

The use of roofing and wall claddings manufactured from COLORSTEEL® ENDURA™ prepainted steel in accordance with New Zealand Steel's instructions will meet the nonhazardous performance requirements of NZBC F2.3.1.

## HANDLING AND STORAGE

If COLORSTEEL® prepainted steel products are to be stored for any time prior to forming or installation, they must be stored in dry, well ventilated conditions. Storage which allows water, (including condensation) to be trapped between the sheets may damage the coating beyond repair. COLORSTEEL® ENDURA™ products must be handled carefully during transport, fabrication and fixing to avoid damaging the surface.

## AVAILABILITY

COLORSTEEL® ENDURA™ prepainted steel is available ex stock from most roofing distributors in a range of colours. Where a colour is not available, delivery is normally within 1–4 weeks, depending on the location of the distributor.

## SERVICEABLE LIFE

The COLORSTEEL® ENDURA™ coating can be repainted to extend its serviceable life. Contact New Zealand Steel for recommendations on overpainting weathered COLORSTEEL® products.

## DRINKING WATER

Rainwater collected from roofs clad with products made from GALVSTEEL™, ZINCALUME® steel and COLORSTEEL® prepainted steel, will comply with the provisions of NZBC G12.3.1, provided the water is not contaminated from other sources.

The first 25mm of rainfall from a newly installed roof must be discarded before drinking water collection starts.

Where a paint or paint system is applied to the roof, its suitability for the collection of drinking water must be established.

## ACCREDITATIONS

The New Zealand Steel paintline is accredited to ISO9001.





## FURTHER INFORMATION

For additional information, literature or technical assistance, please contact:

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<http://www.colorsteel.co.nz>

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COLOUR FOR THE EXTREME

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## COLORSTEEL® Endura™

COLOUR FOR THE FUTURE

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This edition of the New Zealand Steel COLORSTEEL® ENDURA™ Colour Chart supersedes all previous editions.

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NEW ZEALAND STEEL  
100% RECYCLABLE



Kiwi to the core

## COLORSTEEL®

## THE ROOF OF NEW ZEALAND®



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