

Design Guide



COLORSTEEL ALTIMATE® combines a marine grade aluminium substrate with the proven paint technology of COLORSTEEL®.

Designed for superior corrosion protection, Altimate® is the ideal roofing and cladding solution for New Zealand's extreme conditions.

The aluminium substrate delivers exceptional resistance to corrosion, while the COLORSTEEL® paint system offers further protection and the premium finish we have all come to know and love.

Scope of Use

THICKNESSES
0.90mm

MATERIAL GRADE
Aluminium Alloy 5005 H34 or 5052 H36.

FLASHINGS
H36 temper can be used to manufacture flashings folded to 90°.

H34 temper should be considered for more complex or aggressive bends.

COLOURS
Available in the complete colour range.

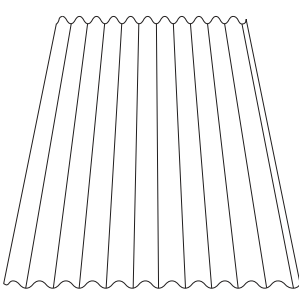
CURVING
Can be crimp curved (trapezoidal) or roll curved (corrugate).

ROOFING
Roof and canopies of all building types.

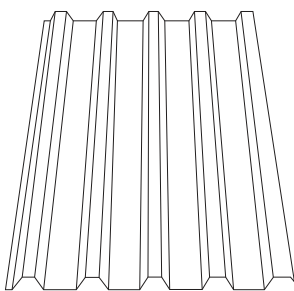
WALL CLADDING
Lined and unlined walls of all buildings.

ENVIRONMENTAL CATEGORIES
Roofing: Mild, Moderate, Severe, Very Severe, Extremely Severe
Wall cladding: Mild, Moderate, Severe, Very Severe, Extremely Severe

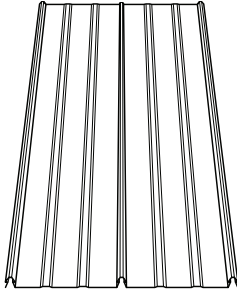
PROFILES



All corrugate profiles



All trapezoidal profiles



All trough and tray profiles

PROFILES



COLORSTEEL FlaxPod®, Trapezoidal Profile Onemana

Design Considerations

COLORSTEEL ALTIMATE® can be fastened directly to galvanized steel purlins or dry timber. For exposed roofs or in buildings with harsh internal environments, Altimate® must be separated from wet timber or coated steel materials that may corrode within the life expectancy of the cladding material. It can be laid over galvanized netting or safety mesh, but must be separated by a 5mm barrier of inert non-absorbent, non-reactive material.

SUPPORTING STRUCTURE

Supporting structure should be designed in compliance with NZ 3604 or AS/NZS 1170 to ensure structural integrity. Surfaces should be clean of grease and dirt that may mark the backer coat and incompatible materials that may cause corrosion.

Design Conditions & Limitations

LIMITATIONS

- Altimate® must not be used in wet contact with iron, steel, stainless steel, lead, timber or butyl rubber.
- Altimate® cannot be used for lock seamed products or for soft edged flashings.

BUILDING USE

Altimate® is recommended for the same building uses as Maxam™. Specific advice should be sought when used on buildings in geothermal areas or with aggressive internal environments, such as swimming pools, intensive animal shelters, galvanizing plants and other activities that produce harsh internal environments.

INSTALLATION

Altimate® must be installed in accordance with the Altimate® Installers Guide and the MRM Code of Practice.

- The following requirements specifically apply to installing Altimate®:
- Altimate® must be isolated from contact with incompatible materials such as steel, stainless steel, lead, copper, wet timber or concrete.
 - All fasteners shall be aluminium or stainless steel. Stainless steel fasteners should be installed through an oversized clearance hole. All roof fasteners must be fitted with a profiled load spreading washer.
 - Sheet lengths over 6m must be provided with oversized holes to allow for thermal expansion.
 - See Altimate® Installers Guide for more information.

Transport

TRANSPORT & HANDLING

As a pre-finished cladding material, please handle with care. Sheets must have adequate support during transport. When unloading, bundles must be placed on clean dunnage clear of the ground.

Compliance

COMPLIANCE

When used and installed as roof cladding in accordance with the conditions and limitations stated in this document, Altimate® will comply with the following clauses of the NZ Building Code.

B1 STRUCTURE

Refer to manufacturers data for the profile, material and thickness used.

B2 DURABILITY

Complies with Table 20 of NZBC E2/AS1 for use as a Hidden, Exposed or Sheltered element requiring 15 years durability in Exposure Zones B, C, D & E.

Complies with Table 20 of NZBC E2/AS1 for use as a Hidden element requiring 50 years durability in Exposure Zones B, C, D & E.

C3 FIRE

Altimate® is rated as a Group 1-S material and has an average specific extinction area of 50.9 m²/kg, a peak heat release rate of 6.5 kW/m² and total heat released of 0.8 MJ/m² when tested in accordance with ISO5660:2002 Part 1 and Part 2.

E2 EXTERNAL MOISTURE

The performance of Altimate® in resisting external moisture is identical to other COLORSTEEL® products.

HAZARDOUS MATERIALS

As stated in the Safety Data Sheet (MSDS), Altimate® is not a hazardous material under normal conditions. MSDS available on request.

Chemical Composition

| MAX OR RANGE | | Si | Fe | Cu | Mn | Mg | Cr | Zn | Other | AL |
|--------------|------|-------|-------|-------|-------|------------|--------------|-------|-------|-----------|
| Alloy | 5005 | 0.30% | 0.70% | 0.20% | 0.20% | 0.5 - 1.1% | 0.10% | 0.25% | 0.15% | Remainder |
| | 5052 | 0.25% | 0.40% | 0.10% | 0.10% | 2.2 - 2.8% | 0.15 - 0.35% | 0.10% | 0.15% | Remainder |

Warranty and Assistance

| ENVIRONMENTAL CATEGORY | | ROOFING | WALL CLADDING | GUTTER DOWNPIPES | FASCIA |
|---------------------------------------------------------------------------------------|--------------------------|--------------|-------------------------------|----------------------------|----------------------------|
| Extremely Severe (typically starts in the immediate vicinity of breaking surf) | Perforation ¹ | 25 years | 20 years | 15 years | 15 years |
| | Paint ² | 15 years | 15 years | 10 years | 10 years |
| | Required Maintenance | Rain washing | Manual washing every 3 months | Manual washing every month | Manual washing every month |

This chart is a guide only. The above warranties are subject to further terms & conditions. For full warranty details please visit [Colorsteel.co.nz/warranty](https://colorsteel.co.nz/warranty).

¹ Against perforation as a result of corrosion.

² Covering the paint surface against flaking, peeling and excessive fade.

TECHNICAL ASSISTANCE

Phone 0800 697 833 | **Email** specifications@colorsteel.co.nz



COLORSTEEL FlaxPod®, Trapezoidal Profile
Onemana



NOTE: Buyers and users of New Zealand Steel Limited products and services must make their own assessment of the products for their own conditions. All queries regarding product specification, purpose or application should be directed to New Zealand Steel Limited, email specifications@colorsteel.co.nz. New Zealand Steel Limited reserves the right to modify products, techniques, equipment and statements to reflect improvements in the manufacture and application of its products. The information contained in this brochure is accurate as at July 2024 and supplied without prejudice to New Zealand Steel Limited's standard terms and conditions of sale. In the event of conflict between this information and the standard terms and conditions, the standard terms and conditions prevail. This brochure supersedes all previous brochure editions. COLORSTEEL® and Altimate® are trademarks of New Zealand Steel Limited. Copyright® New Zealand Steel Limited. July 2024. CSA01

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