



MAINTENANCE GUIDE

ENVIRONMENTAL CATEGORIES

EXTERNAL ENVIRONMENT

Environmental Categories as Defined in the New Zealand Building Code and Cross-Referenced in COLORSTEEL® Environmental Categories for Insulated Panels Manufactured by Metalcraft Insulated Panels

The New Zealand Building Code (NZBC) specifies durability requirements for building materials to ensure they perform adequately over time. These requirements are outlined in Clause B2—Durability, which mandates that building materials, components, and construction methods must be sufficiently durable to ensure that the building, without reconstruction or major renovation, continues to satisfy the other functional requirements of the NZBC throughout its life.

COLORSTEEL® provides a classification system that aligns with these NZBC environmental categories, offering guidance on the appropriate selection of materials to meet durability standards. This classification considers factors such as proximity to the coast, industrial activity, and other environmental influences that can impact material performance.

It's crucial to select the appropriate insulated panel product that aligns with the environmental category of your project site to ensure compliance with the NZBC and to maintain the integrity and longevity of the building materials.

For insulated panels manufactured by Metalcraft Insulated Panels, the following environmental categories apply:

EXTERNAL -ENVIRONMENTAL CATEGORIES FOR COLORSTEEL®			
MILD	MODERATE	SEVERE	VERY SEVERE
Distance from coast: East 5km + West 5km +	Distance from coast: East 500m-5km West 1-5km	Distance from coast: East 100-500m West 500m-1km	Distance from coast: East 25-100m West 50-500m
<p>Typically starts 5 kilometres (depending on your location) from breaking surf such as is found on exposed coasts or greater than 1 kilometre from calm saltwater such as estuaries. Mild environments categorise the majority of New Zealand and are characterised by:</p> <ul style="list-style-type: none">No salt depositsNo smell of salt in the air	<p>Typically starts 500 – 1000 metres (depending on your location) from breaking surf such as is found on exposed coasts or in the immediate vicinity of calm saltwater such as estuaries. Moderate environments are characterised by:</p> <ul style="list-style-type: none">Little or no salt depositsThe occasional smell of salt in the air	<p>Typically starts 100 – 500 metres (depending on your location) from breaking surf such as is found on exposed coasts, characterised by:</p> <ul style="list-style-type: none">Light salt depositsA frequent smell of salt in the airIn the immediate vicinity of large expanses of calm salt water such as harbour foreshoresThis environment may be extended inland by prevailing winds & local conditions	<p>Typically starts 25 metres from the high-water mark on the east coast and 50 metres from the high-water mark on the west coast, characterised by:</p> <ul style="list-style-type: none">Heavy salt depositsThe almost constant smell of salt spray in the airClose to breaking surf such as is found on exposed coasts

EXTERNAL ROOFS AND WALLS

ThermoSpan & ThermoPanel (EPS)

AspireSpan® & AspirePanel® (PIR)

EXTERNAL STEEL LINER

COLORSTEEL® MAXAM® is suitable for use as the external steel liner in external environmental categories from mild to very severe.

INTERNAL STEEL LINER

COLORSTEEL® MAXAM® is suitable for use as the internal steel skin in normal dry environments only.

When using AspireSpan® or ThermoSpan for animal enclosures then internal liner should be COLORSTEEL® CP.

Please consult Metalcraft Insulated Panels for more information.

DURABILITY

When rollformed, installed and maintained in accordance with New Zealand Steel's recommendations, COLORSTEEL® MAXAM® pre-painted steel will 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® MAXAM® products are expected to fade uniformly over the surface, to the extent of no more than 8 Hunterlab units on the Delta E scale, and have a chalk rating of 4 (AS 1580 481.1.11, 1998) after 10 years exposure.

MAINTENANCE -EXTERNAL COLORSTEEL® STEEL SKIN

Metalcraft's insulated panel's require regular care and maintenance to ensure the long-term performance of the system.

MAINTENANCE EXTERNAL COLORSTEEL® MAXAM® STEEL SKIN				
APPLICATION	MILD	MODERATE	SEVERE	VERY SEVERE
ROOFING	Rain washing	Rain washing	Rain washing	Rain washing
CLADDING	Manual washing every year	Manual washing every year	Manual washing every 6 months	Manual washing every 3 months

CONTROLLED ENVIRONMENTS

ThermoPanel (EPS) & AspirePanel (PIR)

EXTERNAL STEEL LINER

COLORSTEEL® MAXAM® is suitable for use in external environmental categories from mild to very severe.

COLORSTEEL® CP is suitable for use in environmental categories from mild to moderate.

INTERNAL STEEL LINER

COLORSTEEL® CP coated steel has been specifically developed for applications in food processing and related industries, including chillers, freezers, meat processing facilities, hygiene-sensitive environments, and animal containment areas. This specialised paint system comprises a steel substrate to which a customised, pre-painted finish is applied. The specially formulated backer coat is designed to form a strong bond with the panel core when combined with readily available adhesives.

COLORSTEEL® CP is suitable for use in internal steel skin in controlled environments. Please consult Metalcraft Insulated Panels for more information.

DURABILITY

When rollformed, installed and maintained in accordance with Metalcraft Insulated Panels and New Zealand Steel's recommendations, COLORSTEEL® MAXAM® or COLORSTEEL® CP pre-painted steel will 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® MAXAM® and COLORSTEEL® CP products are expected to fade uniformly over the surface, to the extent of no more than 8 Hunterlab units on the Delta E scale, and have a chalk rating of 4 (AS 1580 481.11, 1998) after 10 years exposure.

MAINTENANCE -EXTERNAL COLORSTEEL® STEEL SKIN

Metalcraft's insulated panels require regular care and maintenance to ensure the long-term performance of the system.

MAINTENANCE EXTERNAL COLORSTEEL® MAXAM® STEEL SKIN				
APPLICATION	MILD	MODERATE	SEVERE	VERY SEVERE
ROOFING	Rain washing	Rain washing	Rain washing	Rain washing
CLADDING	Manual washing every year	Manual washing every year	Manual washing every 6 months	Manual washing every 3 months

MAINTENANCE EXTERNAL COLORSTEEL® CP STEEL SKIN				
APPLICATION	MILD	MODERATE	SEVERE	VERY SEVERE
ROOFING	Rain washing	Rain washing	NOT SUITABLE	NOT SUITABLE
WALLS	Manual washing every year	Manual washing every year	NOT SUITABLE	NOT SUITABLE

ADDITIONAL MAINTENANCE REQUIREMENTS

In addition to the above maintenance Metalcraft's insulated panels, when used for controlled environments require a 6 monthly check to panels on all sealants exposed to external environment.

WASHING INSTRUCTIONS & GOOD PRACTICE

WASHING INSTRUCTIONS

Manually wash panels with either a sponge, or a soft nylon-bristled brush, or by water blasting at pressures of no more than 20 MPa/2900psi.

Ensure that the following are carefully washed:

- Areas that receive little to no rain wash, such as soffits, wall cladding under eaves, gutters, downpipes, metal fascias and sheltered areas;
- High-risk areas around flues, aerials and satellite dishes, air conditioning units, external hot water heaters, and all penetrations and panel joints;
- Areas with overhanging trees and prone to mould, lichen, and bird droppings.

A visual inspection of dissimilar materials, such as soft edge or galvanised flashings, should be undertaken to avoid corrosion transfer.

Check for lichen and follow New Zealand Steel recommendations if lichen is found.

SCHEDULE

A regular washing schedule will help ensure the long-term performance of the panels by removing the cumulative effects of weather, dust, and other deposits.

GOOD PRACTICE CONTROLLED ENVIRONMENTS

- Cleaning chemicals used for cleaning coolrooms should only be used in concentrations and contact durations, as prescribed by the chemical supplier. In any event, the concentration of the cleaning solution should not exceed 5%.
- The use of soft nylon bristle brooms coupled with water pressures of less than 400psi (2760kPa) is recommended.
- Regular inspection of slip joints and the general detailing of the coolroom will highlight problems before they become major concerns.
- Monitoring of sealant performance at the base of the panel is critical to prevent water ingress.
- Once the moisture has entered the panel, it will expand when frozen, causing the panel to bulge. This causes the seals to be broken and moisture-laden air to enter the panel, causing the panel to bulge further, greatly diminishing the efficiency of the coolroom.
- Bulging of panels could indicate that moisture has entered the panel through the following means:
 - a) Poorly sealed slip joint
 - b) Gap that has developed between the bottom channel and the panel
 - c) Panel has been punctured by, for example, forklift tines
- Consideration should be given to means of preventing damage to coolroom walling incurred whilst handling stock stored within and around the coolroom.

CONDENSERS

The runoff from condensers should not be allowed to discharge via copper pipes over COLORSTEEL® pre-painted steel products.

All run off should be diverted away from the COLORSTEEL® pre-painted steel surface.

BRANCH

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DISCLAIMER

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