NORclad®
TOTAL CLADDING SOLUTIONS

Minimum Installation

General Guidance V2.0 2016

Minimum Installation Requirements

In all cases, the material used to produce NORclad® Cladding and Trims is a natural material and as such will respond to the environment.

The various species of timber used to produce the NORclad® range will swell or shrink as they gain or lose moisture. This happens as the timber seeks to achieve equilibrium with the moisture content of the surrounding air. It is vital for the future performance of all NORclad® products that the moisture content is at equilibrium before it is installed. It is only by ensuring this, movement later on will be minimised.

Acclimatisation and Storage

The NORclad® range of pressure treated and untreated products are not dried prior to delivery and therefore require time to acclimatise when they reach site.

NORclad products must be sticked every layer with vertically aligned sticks and stored in a well ventilated dry location before installation to allow the timber to reach equilibrium with the surrounding air.

It is vital to check overall measurements of the product prior to installation as tolerance on dimension allows for 5-8 mm deviation after treatment until the product acclimatises to equilibrium moisture content. The most important measure is the backface of the boards, and to ensure this has returned to its ‘pre treated’ measure.

For example, MicroShades treated Redwood, NWC2 profile has a backface cover of 125mm.

When on site and prior to installation, the NORclad® range of products need protecting from direct sunlight, water saturation, snow, ice, dirt and other elements. Store all products flat and off the ground on bearers and a vapour barrier so that moisture is not absorbed through the bottom boards of the stack. Protect with a waterproof covering elevated in the centre so that water does not collect on the cover. It is important that the bundle is not completely sealed so that a good air circulation is achieved. Ideally the NORclad® products should be stored in an enclosed building prior to use.

Finishing NORclad® Cedar and Larch Products Prior to Installation

If NORclad® Cedar and Larch products are to be coated on site; it is recommended that the finish is applied to all surfaces including ends prior to installation.

Coatings on these NORclad® products are required to protect the timber from water penetration, UV degradation and helps prevent staining caused by mildew and extractives. In addition pre coating these products can increase the service life of top coats.

Before deciding on a pre-finish coat it is good practice to establish what the intended finish coat is to ensure the product you select is compatible.

On Site Cutting

All on site cuts made to the NORclad® range of products which have been treated or coated (painted) must be finished with an appropriate end seal. End grain absorbs liquid 250 times more rapidly than other wood surfaces and must therefore be protected regardless of the prevailing weather conditions at time of installation.

For MicroPro and MicroShades (Brunnea) pressure treated products, a concentrated end seal product must be used on all on site cuts as recommended by Koppers Ltd. For Cedar products in the range, end cuts must be sealed with an alkyd oil wood primer. For painted products end cuts must be sealed with paint coating solution being used on the cladding.

Fixings

It is recommended that installation should be carried out by a professional.

Timber is a natural product; a characteristic of this is for boards to have variation in colour, knot sizes and frequency. With timber constantly taking on, and losing moisture there may be some swelling and shrinkage of boards – in particular when the timber is first delivered to site and finding its equilibrium moisture content with the surrounding air.

As NORclad supply a number of species, treated and coated products please make contact for specific questions you may have, or advice you may need.

The following is a general guide:

Most cladding is designed for horizontal application, only certain profiles are recommended for vertical use. On horizontal applications the tongue should be placed at the top, with the groove at the bottom - this will ensure water flows away from the boards.

Cladding should be installed to impregnated battens e.g. 38 x 50 / 47 x 50mm. This should be specified and accounted for in the design by your Architect.

- It is critical each board is independently fixed
- Face fixed profiles require 2 fixings per batten/board as shown on page 3
- Secret fixed profiles can be installed with 1 fixing per batten/ board as shown on page 4
- We do not recommend you secret fix boards over 100mm as per TRADA recommendation
- Airflow behind the cladding, ensure the backing structure is ventilated
- Ensure detailing and flashings direct water away from the building
- Install a minimum of 200mm above impermeable ground.
- Do not allow vegetation to contact cladding, directly/ indirect wetting
- Always apply End Seal after on site cutting

All NORclad products must be fixed using Stainless Steel grade 304 fixings.

We recommended annular ring shank nails with a flat head, lost/ small head fixings are not recommended. The fixing should sit flush to the board surface, hand nailing is recommended for all installation to ensure there are no overdriven nails, where nails are overdriven the hole should be filled with an exterior grade wood putty.

If a nail gun is to be used then care should be taken to ensure nails are not overdriven as this can cause splitting and visible damage to the facade which is likely to be unacceptable.

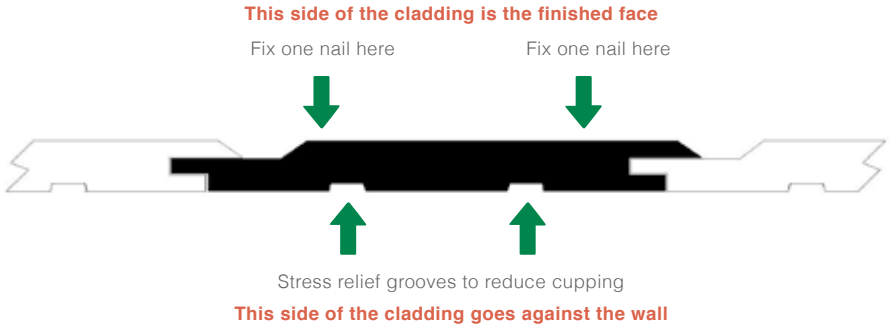
Material: Stainless Steel Grade 304
Type: Annular Ring Shank
Nails Length: The fixing length should be: Redwood & Larch (2x thickness of cladding)Cedar (2.5x thickness of cladding)
Head: Flat head ***(lost / small head nails are not recommended)***
Gauge: 2.9mm
Positioning: Nails should be at least 20mm from the end of the boards and 15mm from the edges. It is suggested that these holes towards the ends of boards are pre-drilled.

How to Fix NORclad Cladding

Face Fix Profile over 100mm

The most important point is to fix the boards separately, that is not to fix nails through more than one board. This is to allow the boards to move independently when they expand and contract.

We suggest the nails are fixed through the thickest part of the cladding, that is to the left of the left stress groove and to the right of the right groove – see attached diagram. Fit the boards tightly together as they will shrink over time. When fixing end to end fix this as tightly as possible.



For all boards, stainless steel nails should be used in order to avoid long term rust stains on the wood. Stainless steel will weather to a matt grey colour similar to that of bleached wood, reducing the visibility of the nails in the long term. Even where a surface coating is used stainless steel nails should be used.

Please lift wrappers on site once timber has been delivered, this will aid airflow to all of the boards and help with product acclimatisation.

Best Practice Installation facts

• Ensure Timber is fully acclimatised before final installation of the product. All dimensions of the timber, most importantly the back face cover should have returned to their original dimensions. We would recommend backface cover of Ex 25 x 150mm items has returned back to 125mm prior to fixing.

• Re-working at the installation site should be limited to cross cutting, drilling or notching. All exposed surfaces should then be given two liberal brush coats of a suitable preservative as recommended by the manufacturer of the industrial wood preservative used in the original treatment.

• It is important to remember that the penetration achieved by brush is less that achieved in the pre-treatment process and it is best to avoid or minimise re-working.

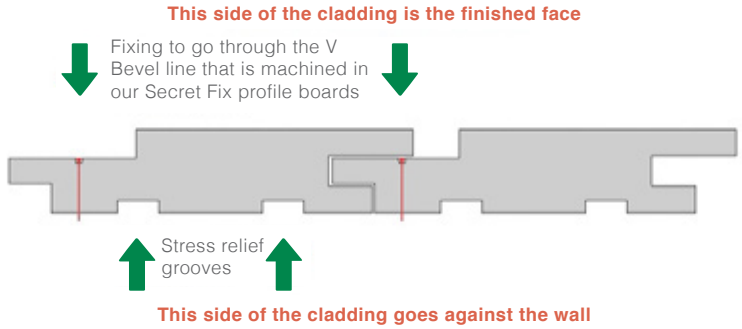
How to Fix NORclad Cladding

Secret Fix Profile up to 100mm

The most important point is to fix the boards separately, that is not to fix nails through more than one board. This is to allow the boards to move independently when they expand and contract.

We suggest the nails are fixed through the V-Bevel line on our secret fixed profiles, as indicated on the diagram below.
This will allow ease of installation, and also ensure the following board covers the fixing. Fit the boards tightly together as they will shrink over time. When fixing end to end fix as tightly as possible.

First Board Installation: When installating the first boards on an elevation a face fixing will be required.



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Please lift wrappers on site once timber has been delivered, this will aid airflow to all of the boards and help with product acclimatisation.

Best Practice Installation facts

• Ensure Timber is fully acclimatised before final installation of the product. All dimensions of the timber, most importantly the back face cover should have returned to their original dimensions. We would recommend backface cover of Ex 25 x 100mm items has returned back to 72mm prior to fixing.

• Re-working at the installation site should be limited to cross cutting, drilling or notching. All exposed surfaces should then be given two liberal brush coats of a suitable preservative as recommended by the manufacturer of the industrial wood preservative used in the original treatment.

• It is important to remember that the penetration achieved by brush is less that achieved in the pre-treatment process and it is best to avoid or minimise re-working.

Installation Guide

• Treated wood must never be rip sawn along its length. If this takes place, it must be returned to the treatment plant and retreated prior to use.

• 30 Year Warranty applies only to orders where UC3 is specified for out of ground contact components.

Koppers Micronized pressure treated timber from NORclad Ltd, when used in the appropriate Use Class (UC) situations, has a 30 year guarantee against failure of the timber from fungal decay or insect attack.

It does not cover the costs of removal or reinstatement of such components or consequential costs or loss due to failure of the component. Claims must be brought within two weeks of the expiry of the 30 year period, at the latest and must be accompanied with proof of purchase and a sample of the failed material.

• The terms rot and fungal decay as used in this guarantee mean attack by wood destroying fungi that disintegrate the wood cell walls but do not include stating fungi associated with the weathering of wood. Weathering of wood is not fungal decay or rot of any type or definition

• The term insect attack refers to attack by wood destroying insect that destroy the timber structure such as Termites.

• The term failed refers to damage caused by insects and/or fungi to such an extent that the component is no longer fit for purpose.

This guarantee does not affect the statutory rights of the customer.

Conditions

1) Only NORclad Ltd Micronized treated to UC3 must be used.

2) All NORclad Ltd Micronized pressure treated timber in the NORclad® Range of products must be installed in accordance with the 'Minimum Installation Requirement' Document with special attention if the timber is cross cut, notched or bored during installation, then exposed surfaces must be coated with a suitable end coat preservative according to the correct application directions.

Exclusions

This Warranty does not apply to

1) Any NORclad Ltd Micronized component supplied for use outside of European markets.

2) Any NORclad Ltd Micronized component removed from their original installation and re-used at a new location.

3) Any damage caused to products used in commercial or industrial structures.

4) Building poles, commercial vineyards stakes or peeler core landscape timbers.

5) Damage caused by weathering of wood, including but not limited to raised grain, splitting, cracking, twisting, warping, shrinkage, swelling or any other physical property of the wood, or where untreated material is exposed by the effects of this weathering.

6) Timber degrade which is the result of the natural movement of wood in service, including weathering, twisting and splitting of components.

7) A piece of treated timber that is cut, drilled or notched after preservation unless the exposed area has been treated with an effective end coat.

8) Areas of wood where preservative surface penetration is consistently limited to less than 3mm or is effectively unachievable due to natural variations in the wood substrate and/or abnormal growth characteristics.

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For more information and to discuss your options, please contact us:

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Find our products on RIBA nbsPlus and RIBA Product Selector

nbsPlus

riba product selector