

STEEL Fact File

An information source for design professionals

FF6 – Roof Fixing Do's and Don'ts

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- How to ensure you maximise the life of your roof when installing steel roofing
- To maximise the life of your roof observe the following Do's and Don'ts

What To Do

Care and Storage:

- ✓ Material should be stored dry at all times, therefore cover stack with a tarp and stack sheets or bundles clear of the ground to avoid material getting wet.
- ✓ Should material get wet, unpack wet sheets to allow drying. Use a clean cloth to remove surface moisture, and stack in such a way that air circulation completes the drying process.

Walking on Roof Sheeting:

- ✓ Clean soft-soled shoes should be worn. Dunlop Volley shoes with natural rubber sole are recommended for use when installing and inspecting roof sheets.
- ✓ Keep weight evenly distributed over the soles of the feet, as new sheets may be slippery.
- Walk on purlin lines wherever possible.
- Comply with relevant "working at heights" legislation.

Compatibility:

- ✓ Always use coated steel purlins and girts to avoid any Clean COLORBOND™ steel or ZINCALUME® steel contact with bare steel or treated timber.

Bending:

- ✓ Bending of Clean COLORBOND™ steel should preferably be done without the use of a lubricant.
- ✓ Bend radii should be within recommendations of the product data sheet.

Cutting sheets on site:

- ✓ Use metal blades rather than carborundum disc angle grinders as they produce fewer damaging hot metal particles, leaving fewer burrs on the cut sheet. BlueScope Steel recommends the use of cold cutting saws (such as the Makita 4130 unit or an equivalent saw) with appropriate blade.

Fasteners and accessories:

- ✓ All screws should have rubber sealing washers. Rubber washers should be EPDM quality or the equivalent and be free of carbon fillers.
- ✓ Buy fasteners that are as durable as the roof sheeting you have purchased and that comply with class A53566 Class 3 minimum. (A53566 is a performance based standard

that specifies a minimum coating thickness for fasteners to be used in interior (Class 1) to severe marine (Class 4) environments).

Use of sealants:

- ✓ Use neutral cure silicone rubber sealants which offer the following:
 - a) Good adhesion to the clean surface of roof sheeting.
 - b) Water resistance and are non-corrosive to the sheeting.
 - c) Resistance to extremes of heat and cold while retaining good flexibility.
 - d) Provide high resistance to ultra-violet rays (sunlight) and have a long service life.
- ✓ White spirits such as Shell X-55 can also be used to clean the surfaces to be sealed.

Swarf removal:

- ✓ Remove all metal scraps, pop rivet mandrels and excess fasteners from the roof at least daily to avoid rust stains.
- ✓ When cleaning up after having installed roof sheets clean out the gutters, ensuring not to leave metal tailings.

Brick cleaning:

- ✓ Ensure that brickwork that sits above / adjacent to a section of roof is cleaned before roof and gutter installation.

Following Trades:

- ✓ Pipes and other penetrations made from copper or lead must be post painted to prevent the deposition of metallic copper ions upon the roof surface. Failure to comply with this requirement will result in the accelerated corrosion of the roof sheet.
- ✓ Any mortar / concrete should be removed immediately from the roof sheets.

Detergents & Cleaners:

- ✓ Only non-ionic detergents or "kitchen" detergents are recommended for cleaning of roof sheets. (A soft cloth, mop or soft nylon bristle brush may be used.)
- ✓ Follow with thorough water rinse.

What Not To Do

Care and storage:

- ✗ Store packs of sheets in the open where they can get wet.

Cutting sheets on site:

- ✗ Cutting should not be carried out on top of other roof sheets.

Roof Fixing Battens:

- ✗ Do not use copper/chrome/arsenic (CCA) treated timber battens/purlins as perforation of the roof sheet can occur. Separate CCA treated battens from roofing sheets with appropriate barrier such as insulation paper.

Compatibility:

- ✗ Lead and copper are not compatible with Clean COLORBOND™ steel or ZINCALUME® steel products.

Bending:

- ✗ Do not use kerosene or distillate on Clean COLORBOND™ steel as they soften the paint film.
- ✗ Do not exceed the minimum bend radii as this could crack the protective film.

Use of sealants:

- ✗ Do not use acetic acid based sealants. While being ideal for use with other materials they liberate aggressive by products during curing which is detrimental to sheet steel. These often have a vinegar or ammonia smell.

Swarf removal:

- ✗ Do not leave metal articles on the roof as they will cause rust staining.

Brick cleaning:

- ✗ Do not allow brick cleaning fluids to spray onto or flow across sheeting and into gutters. This can lead to premature failure of the paint and corrosion of the metal.

Fasteners and accessories:

- ✗ Do not use galvanised steel ridge cap flashings or gutters with ZINCALUME® steel or Clean COLORBOND™ steel. The galvanised steel will need to be replaced at an earlier interval.
- ✗ Do not use stainless steel screws, galvanised washers, cadmium plated screws or other type of screw that doesn't comply with AS 3356 Class 3 (or Class 4 in severe environment) with ZINCALUME® steel or Clean COLORBOND™ steel as this will lead to premature failure of the roof sheet.

Surface damage:

- ✗ Touch up paint is not recommended to repair surface scratches on Clean COLORBOND™ steel. The different weathering pattern of touch up paint will lead to an inconsistent colour across the sheet's surface. It is recommended that severely damaged sheets be replaced.
- ✗ If the Clean COLORBOND™ steel sheet is only scratched back to the ZINCALUME® steel coating, leave the scratch bare as the sacrificial properties of zinc will produce an oxide to protect the surface from corrosion.
- ✗ If the sheet is scratched back to the cold rolled metal base and the scratch is greater than 2mm wide, sacrificial protection will be reduced and those sheets should be replaced.

Following trades:

- ✗ Do not mount roof air conditioning units on CCA treated timber. Also do not place CCA treated timber or green hardwood dunnage on roof sheets.

Detergents and cleaners:

- ✗ Never use abrasive or solvent type cleaners (turpentine, petrol, kerosene, paint thinners) on Clean COLORBOND™ steel/ ZINCALUME® steel surfaces.
- ✗ Never use wire brushes, steel wool, or sponge scourers to clean the roof sheet.

Refer to www.bluescopesteel.com.au/technical_library for

- Grade data sheets
- Material safety data sheets

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BlueScope Steel Southern Africa (Pty) Ltd

Phone: +27 21 442 5420

Fax: +27 21 448 9132