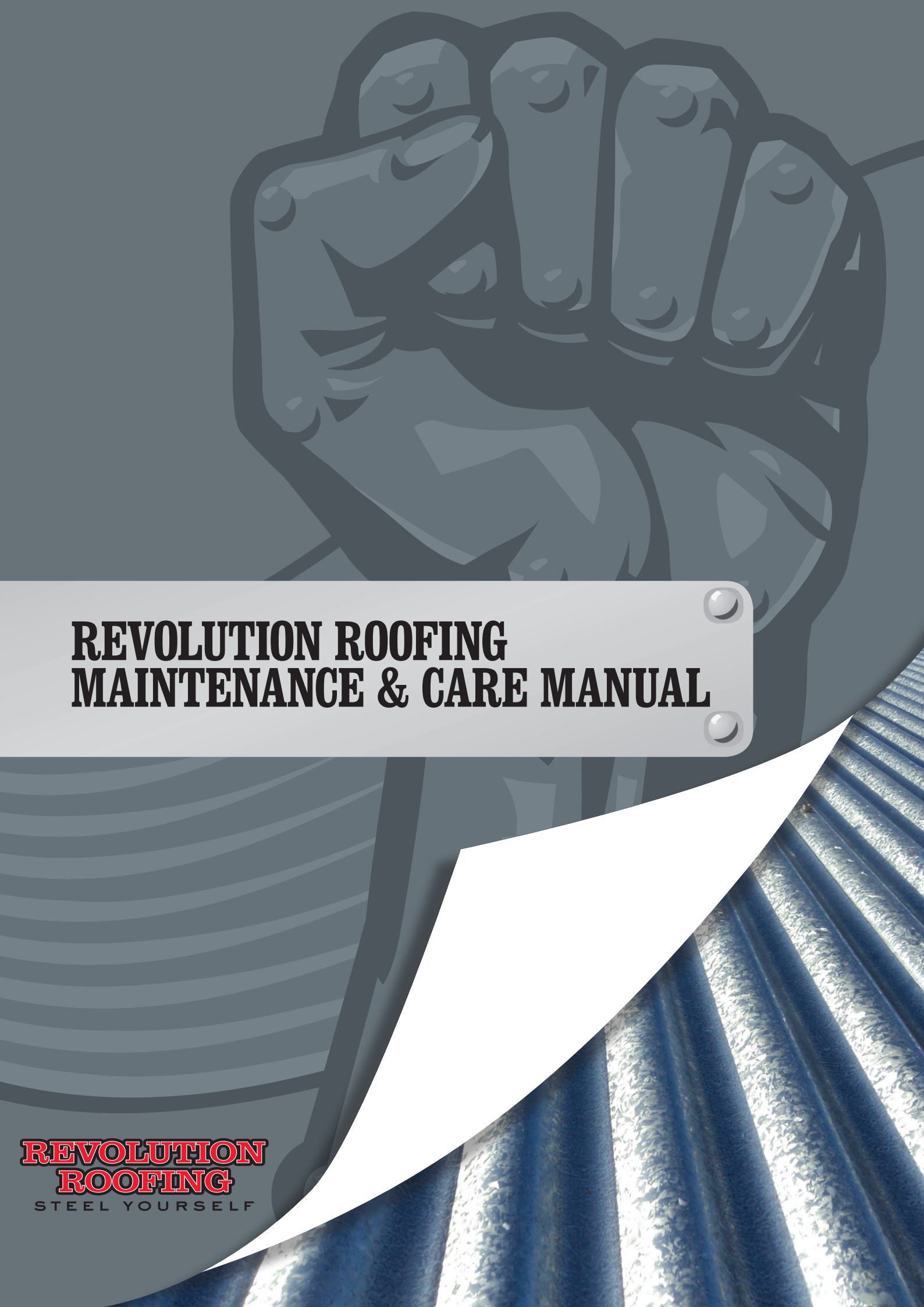
REVOLUTION ROOFING MAINTENANCE & CARE MANUAL



REVOLUTION ROOFING
STEEL YOURSELF

Simple maintenance of COLORBOND® steel and ZINCALUME® steel by regular washing with water, will not only prolong its life but maintain its appearance for longer periods thus protecting your asset. Applications where the paint finish is naturally washed by rainwater do not usually require such maintenance.

If cared for in accordance with these instructions, your building components made from COLORBOND® Prepainted steel and ZINCALUME® steel will give many years of low maintenance life.

UPKEEP OF AREAS NOT WASHED BY RAIN

Areas not regularly washed by rainwater should be hosed down at least every six months and more frequently in coastal areas where marine salt spray is prevalent, and in areas where high levels of industrial fallout occur.

In cases where the regular maintenance referred to above does not remove all dirt, which may have adhered to the surface of the paint, the following procedure should be carried out:

1. Wash the surface with a mild solution of pure soap or mild non-abrasive kitchen detergent in warm water.
2. Application should be with a sponge, soft cloth or soft bristle nylon brush, and should be gentle to prevent shiny spots.
3. The COLORBOND® steel and ZINCALUME® steel should be thoroughly rinsed with clean water immediately after cleaning to remove traces of detergent.

Never use abrasive or solvent type cleaners (turps, petrol, kerosene, paint thinners) on COLORBOND® steel and ZINCALUME® steel.

ENVIRONMENT

Avoid locating the steel near polluted areas or in areas with aggressive environmental factors that could reduce the life of the steel.

This includes areas near barbeques, diesel fumes, air-conditioners, clothes dryers, sprinklers, bore water, water softeners and industrial applications.

GENERAL MAINTENANCE GUIDELINES

For the use of COLORBOND® steel and ZINCALUME® steel products, BlueScope Steel recommend that you:-

- Always use the recommended steel grade to suit your environment and any special corrosive influences.
- Store material clear of the ground and protect from rain and moisture prior to installation.
- Always use fasteners with durability equal to the material being used and which have carbon-black-free washers.
- Avoid materials and liquids which can cause corrosion, such as lead and copper, green timber or CCA (Copper-Chrome-Arsenic) treated timber, uncoated steel supports, fertilisers, pesticides and abrasive cleaners.
- Avoid using galvanised gutters with roofing made from ZINCALUME® steel, COLORBOND® steel or glazed tiles, refer **“Acceptability Of Drainage From An Upper Surface To A Lower Metal Surface”** on page 6 of this section.
- Ensure all other metals or alloys that are in direct contact with ZINCALUME® steel and COLORBOND® steel are compatible, refer **“Direct Contact Between Metals”** on page 5 of this section. Follow manufacturers recommendations for roof pitch, fastener spacings and type, support spacings and other laying procedures when installing products.
- Avoid the use of black carbon (‘lead’) pencils for marking sheets.
- Use metal cutting discs or shears to cut sheets rather than angle grinder discs.
- Use only neutral cure silicone rubber sealants.
- Debris from cutting, piercing & screwing should be removed at the end of each day, and not left on the roof or in the gutters.
- Avoid immersion in concrete, soil or water, or build up of debris against the product.
- Avoid contact with brick cleaning acid.
- Avoid using touch up paint.
- Areas not washed by rainwater should be hosed down at least every six months (more frequently in areas with industrial fallout or high salt concentrations).
- It has been found that sunscreen containing semi-conduction metal oxides such as titanium dioxide (TiO2) and Zinc Oxide (ZnO) can accelerate degradation of organic materials such as paint. Revolution Roofing recommend you prevent contact of titanium dioxide (TiO2) and Zinc Oxide (ZnO) containing sunscreens.

SELECTING A SEALANT FOR THE JOB

Neutral Cure silicone rubber sealants are the only sealants recommended for use with COLORBOND® steel and ZINCALUME® steel. Look for the words “Neutral Cure” on the sealant cartridge to make sure.

Neutral core sealants do not have acidic additions, which may adversely affect steel, provide good adhesion and do not require a primer except in extreme service conditions. The neutral sealant also provides very high resistance to the damaging effects of ultra violet rays whilst resisting extremes of both heat and cold while retaining good flexibility.

These factors ensure neutral cure sealants give long life compatible with the performance of COLORBOND® steel. Sealants should be applied to avoid exposure to UV rays (i.e. sandwiched in the lap), and so they don’t create water run-off and dirt tracks down a roof or facade. Refer BlueScope Steel Technical Bulletin TB-9 ‘Sealants for Exterior Surfaces’, for more information or visit www.bluescopesteel.com.au.

TOUCHING UP SCRATCHES

Pre-painted steel may get scratched while being handled, however the use of touch-up paints is not recommended. They will weather differently to the original oven cured coating and this may cause variations in colour and exaggerate minor blemishes over time.

In most cases, minor damage to roofing and guttering cannot be seen and any attempt to overspray the damage may become more unsightly in the future. Minor scratching will not affect the life of the sheet and is rarely obvious to a casual observer. Where the damage is substantial the sheet should be replaced

OVER PAINTING

ZINCALUME® coated steel can be painted without the need for an etch primer. Some paints allow galvanised material to be over painted without priming so check your paint for details. Steel supplied with a pre-painted surface can be repainted with minimal preparation.

COLORBOND® steel should not to painted without reference to the relevant BlueScope Technical Bulletin. Refer BlueScope Steel Technical Bulletin TB-2 ‘Overpainting & Restoration of Colorbond® steel prepainted sheets’, for more information or visit www.bluescopesteel.com.au.

SWARF REMOVAL

Swarf particles, if left on the surface, will corrode and cause rust stains which will detract from the finished appearance of the project. These stains are often mistaken for early deterioration of the roofing and walling itself.

Swarf can be removed from steel by scrubbing the area with a stiff nylon brush dipped in a mild detergent solution. Rinse the surface with water afterwards to ensure any particles are washed away. If necessary, mop up any excess water with a clean cloth.

Ensure any particles that are swept into the gutters are removed. If swarf staining has already occurred it is not easily removed and badly affected areas may need to be painted or replaced.

Prevention of swarf staining is the responsibility of the installer and it is strongly suggested that all recommendations regarding swarf staining be followed. Refer BlueScope Steel Technical Bulletin TB-5 ‘Swarf Staining’, for more information or visit www.bluescopesteel.com.au.

PREVENTION

CUTTING

BlueScope Steel Limited recommend the use of cold cutting saws with an appropriate cutting blade. This is the best method of producing straight cuts on site, as it generates larger and cooler particles than abrasive discs.

Where possible, cutting should be minimised by using factory supplied cut-to-length sheets. For complex cuts, such as those associated with roof penetrations, BlueScope Steel recommend the use of powered hand shears.

Sheets cut on site should, where practicable, be cut on the ground, with the exterior colour finish of the prepainted steel facing down. PLEASE NOTE- this method may produce a burr which must be removed prior to fixing. Care should be taken to ensure hot swarf does not come in to contact with nearby COLORBOND® steel sheets. DO NOT cut over the top of other coated products, where debris may fall on to other sheets.

Where cutting must be carried out near sheets already installed, the area around the cut must be masked and the stream of hot particles directed away from completed work.

DRILLING

The area around the hole should be masked to shield the product from hot swarf.

CLEAN UP

The roof should be swept, hosed and vacuumed or blown progressively to remove loose particles. Maximum care should be taken when attempting to detach swarf that has become stuck; this can be done, but no action that is likely to remove the paint or metal coating should be attempted.

Any damage to these coatings may lead to a reduced life of the material. When sweeping or hosing in to a gutter, clean out the gutter before leaving the job in order to prevent premature corrosion. On completion of the job give a final wash or sweep down.

REPAIR

Metallic Coated Steel Sheet; Brush the surface with a stiff bristle (non metallic wire) brush to dislodge particles which must then be completely removed, not just swept in to the guttering.

Wire brushing will mar the appearance of the sheet if brushing is not followed by painting. If the costing is severely damaged by swarf corrosion, the area should be replaced, or painted following the recommendations mentioned in this manual.

PREPAINTED STEEL SHEET

MILD STAINING

A mild household washing up detergent used according to directions, will remove most mild staining arising from swarf.

SEVERE STAINING

1. Clean the surface by washing with a mild household detergent and water in proportions as recommended by the detergent manufacturer, then wash well with clean fresh water.
2. Remove the corrosion product by using a stiff nylon brush and washing off completely. More heavily affected areas may need a light rub with a scotch guard type pad (do not use steel wool). Abrasive papers should only be used if painting is to be carried out. Great care must be taken not to cause excessive damage to the paint film.
3. Finally, should steps 1 & 2 above prove to be ineffective, treat affected areas with a rag soaked in a solution of METAPHOS AR67 (AMERON Paints), DEOXIDINE (PPG Ltd), or similar. Hose down completely after treatment with fresh water, as residual acid at the cut edge of the sheeting will cause accelerated corrosion of the metallic coating.

Refer BlueScope steel Technical Bulletin TB-5, 'Swarf staining of steel roofing and walling particles' for more information.
See www.bluescopesteel.com.au

FASTENERS FOR ROOFING & WALLING PRODUCT

Fasteners used to fix roofing, walling and accessory products manufactured from steel strip and sheet must give long, trouble free service when exposed to the atmosphere in environments ranging from benign to sever in terms of corrosive effect.

CHOICE OF FASTENERS FOR LONG LIFE

When a long-lasting product is used for roofing, walling and accessories, it is vital the performance of the fasteners used to fix cladding and accessory materials have the same or superior service life as the BlueScope steel Limited product with which they are to be used.

Please contact your nearest Revolution office for details on the appropriate product to suit your project. The correct selection of fastener for these jobs is of paramount importance for long term structural performance and aesthetics.

Please see the below table which has been extracted from BlueScope steel Technical Bulletin TB-15, 'Fasteners for roofing and walling product- selection guide'. The table gives a guide to the fastener metal type recommended for various BlueScope steel strip ad sheet products. In the interest of quality assurance it is essential fasteners used comply with Australian Standard AS 3566.

Fastener materials for use with roofing and walling manufactured from BlueScope steel strip and sheet products.	
BlueScope steel Product	**Appropriate Fastener Type**
COLORBOND® steel, XMA, XPD, steel ZINCALUME® steel AZ150 steel	Fasteners conforming to AS 3566 Class 3
COLORBOND® Ultra* steel COLORBOND® steel (Note: applies to COLORBOND® steel used 200-400m from marine environments i.e. "severe" environments).	Fasteners conforming to AS 3566 Class 4 (Note: Stainless steel fasteners which conform to AS 3566 class 4 are not recommended for use with COLORBOND® steel or COLORBOND® ULTRA steel.)
COLORBOND® stainless steel	Quality stainless steel fasteners

*Fasteners conforming to AS3566, class 3 should not be used within 400 metres of the ocean or other severe marine influence areas.

COMPATIBILITY

Stainless steel, lead, copper, and copper containing alloys (such as MONEL) should not be used in conjunction with Metallic Coated or Galvanised, ZINCALUME® steel, COLORBOND® steel, COLORBOND® steel XPD, COLORBOND® steel XMA or COLORBOND® Ultra steel.

FASTENER TYPES

There are two fastener designs to be considered for use with BlueScope Steel materials:-

- Self- drilling screws complying as with AS3566-2000 for fastening cladding to a building structure, and
- Accessory fasteners for fastening roofing accessory items such as flashings.

Where accessory fasteners such as pop rivets are required, they should be manufactured from aluminium when fastening Galvanised, ZINCALUME® steel, COLORBOND® steel Ultra and COLORBOND® steel XPD, COLORBOND® steel XMA or COLORBOND® Ultra steel.

Refer BlueScope steel Technical Bulletin TB-15, 'Fasteners for roofing and walling product- selection guide' or www.bluescopesteel.com.au for more information.

DIRECT CONTACT BETWEEN METALS

Direct Contact Between Metals							
Accessory Material	Atmosphere Classification	Rainwater Goods and Any Cladding Material					
		Aluminium Alloys	Copper and Copper Alloys*	Stainless Steel (300 series)	Zinc-Coated Steel and Zinc	Aluminium / Zinc Alloy-Coated Steel	Lead
Aluminium Alloys	SI & VS	Yes	No	No	Yes	Yes	No
	Mild	Yes	No	No	Yes	Yes	No
Copper and Copper Alloys*	SI & VS	No	Yes	No	No	No	Yes
	Mild	No	Yes	No	No	No	Yes
Stainless Steel (300 series)	SI & VS	◆	No	Yes	No	No	Yes
	Mild	Yes	Yes	Yes	Yes	Yes	Yes
Zinc-Coated Steel and Zinc	SI & VS	❖	No	No	Yes	❖	No
	Mild	❖	No	No	Yes	❖	Yes
Aluminium / Zinc Alloy-Coated Steel	SI & VS	Yes	No	No	Yes	Yes	No
	Mild	Yes	No	No	Yes	Yes	No
Lead*	SI & VS	No	No	No	No	No	Yes
	Mild	No	Yes	Yes	Yes	No	Yes

O Includes monel metal rivets.
◆ Grade 316 in accordance with AS 1449 is suitable.
❖ Unpainted zinc-coated steel and zinc are suitable for direct contact but should not receive drainage from an inert catchment. Please contact your nearest Revolution Roofing office for more information.

LEGEND:

SI, VS, Mild = severe industrial, very severe and mild classification (see AS/NZS 2312).
Yes = acceptable - as a result of bimetric contact, either no additional corrosion of rainwater foods will take place, or at worst, only very slight additional corrosion. It also implies that the degree of corrosion would not significantly shorten the service of life.
No = not acceptable - moderate to severe corrosion of rainwater goods will occur, a condition which may result in a significant reduction in the service of life.

Note: Unless adequate separation can be assured, prepainted rainwater goods should be considered in terms of the base metal or coated steel.

*Due to its toxicity, lead is not recommended for rainwater goods.

ACCEPTABILITY OF DRAINAGE FROM AN UPPER SURFACE TO A LOWER METAL SURFACE

Acceptability Of Drainage From An Upper Surface To A Lower Metal Surface						
Upper Cladding or Rainwater Goods Material Fastener Material	Lower Rainwater Goods Material					
	Aluminium Alloys	Copper and Copper Alloys*	Stainless Steel (300 series)	Zinc-Coated Steel and Zinc	Aluminium / Zinc Alloy-Coated Steel	Lead
Aluminium Alloys	Yes	⊙	⊙	No	Yes	⊙
Copper and Copper Alloys*	No	Yes	⊙	No	No	⊙
Stainless Steel (300 series)	⊙	⊙	Yes	No	⊙	⊙
Zinc-Coated Steel and Zinc	Yes	⊙	⊙	Yes	Yes	⊙
Aluminium / Zinc Alloy-Coated Steel	Yes	⊙	⊙	No	Yes	⊙
Lead	⊙	Yes	Yes	⊙	No	⊙
Prepainted Metal	Yes	⊙	⊙	No	Yes	Yes

⊙ Whilst drainage between the materials shown would be acceptable, direct material contact should be avoided (see Direct Contact Between Metals)

LEGEND:
Yes = acceptable
No = not acceptable

Note: 'acceptable' and 'not acceptable' imply similar performances to those noted in Direct Contact Between Metals.

BLUESCOPE TECHNICAL BULLETINS

BlueScope Steel provide a range of informative data in a series of Technical Bulletins and Corrosion Technical Bulletins available on their website www.bluescopesteel.com.au.

Please refer to the appropriate BlueScope Steel web site for the latest recommendations for Technical bulletins: http://steelproducts.bluescopesteel.com.au/home/technical-library.

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