

ROOFRITE

Roof Coating System



Application Guide

Quality coatings that will restore and add value to your property.

Superior protection in New Zealand conditions.



ROOFRITE

Designed for

New Zealand Conditions

•

Environmentally Friendly

•

Low VOC

•

Long-term Roof Protection
with Outstanding Durability

•

Suitable for Coastal Areas

•

Suitable for the Collection
of Drinking Water

•

Superior Paint Protection

•

your Colour Choice is

•

Fade Resistant Pigments

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1.0 Why should a Roof be Restored?

1.1 Weather Protection

The roof is a major part of the building providing protection from the elements and it requires a maintenance programme the same as any other part of your house. A roof which leaks and allows water in to your home and result in structural damage and toxic mould growth.

1.2 Structural Issues

A breakdown of the surface of the roof could allow further breakdown of the roof structure itself and this could lead to more serious structural problems.

1.3 Adding Value

The value of any building is greatly improved by the exterior appearance of the property – this includes the roof. Painting is a cost effective solution.

1.4 Factors to Consider when Deciding to Restore a Roof

Things to consider when planning to restore a roof.

- **What sort of roof you have?**

Most roofs are either galvanised iron or Zinalume, but there will be significant differences in the age and condition of the roof and this can change the system we recommend.



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- **Is the roof already painted?**

- **Is it corrugated or long run?**

We also cover COLORSTEEL®, which will generally need repainting after 12-15 years.

- **How old is the roof?**
- **What is the condition of the roof and paint system?**

Roofs in good condition are easy to paint.

NOTE: Old uncoated roofs may look sound but will have a vastly reduced layer of zinc left and may need a second coat of primer.

- **Flaking and rusting roofs need to be well prepared before any topcoats are applied.**
- **Is the home (or building) close to the sea – say within 500 metres?**

Roofs close to the sea should have two coats of primer applied. The underside of exposed galvanised soffits must have extra coats of primer.

- **Roughly how big is your roof?**

To determine paint quantities and select the most appropriate accessories you need to know if its long run or corrugated as a corrugated roof roller is useless on a long run (tray) roof.

- **Are you painting the roof yourself?**

If you are painting the roof yourself, you will need to have information on how to:

1. Prepare the roof for painting.
2. How to apply the paint, particularly if using a MIOX or aluminium colour.
3. Paint and prepare the roof safely.



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Access to these roofs will be difficult and potentially dangerous.

- **What colour do you want?**

Light colours will show up defects in roofs. Dark colours to which are formulated using non solar reflective pigments will absorb more IR radiation (heat) and can be prone to early failure. Commercial Coating Manufacturers Limited also has colour matches for most 'COLORSTEEL®' and some COLORCOTE® colours.

- **Have you considered a Cool Colour to minimise heat retention?**

- **Do you collect drinking water from the roof?**

This is more likely to be the case with rural homes or holiday baches. If the answer is yes, disconnect the drainpipes until the for at least the 2-3 decent rain showers.

2.0 Why use ROOFRITE®?

2.1 It is a Purpose Made System

Roofrite is a range of products designed to be used as a System. With specific Primers, Sealers and Basecoats, Roofrite ensures you are using the best paint system possible for each individual roof type.

2.2 It is Formulated for Professional Applicators

Being ready-made for spray application, Roofrite products do not need to be thinned.

2.3 Coastal Areas

When used as a system, Roofrite products give maximum protection for coastal areas.

2.4 It is an Investment

Using a Roofrite system will restore and add value to a home or commercial property.



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2.5 It's the Best Quality available

Roofrite products are formulated using the best quality, tough acrylic resins available.

2.6 Low VOC and Enviro-friendly

All Roofrite products have low VOC levels and are safe for the collection of drinking water.

(allow 3 rainfalls before collecting water for drinking).

2.7 How much roof paint will I needed?

For corrugated iron roof, take the floor plan area and add an additional 40% to allow for the pitch of the roof, the corrugations and soffit overhangs. (Corrugated iron is 10.5% greater in area than its flat measure.)

- For long run and other tray sections, which have a greater overall surface area, double the floor area to work out the paint volume.
- If a tiled roof is being painted then the floor area should also be doubled.
- You will usually use between 1 and 4 litres of primer or basecoat if the roof is in reasonable condition.
- Use a spreading rate of 12m² per litre for each coat of Roofrite (or 6m² per litre for two coats).



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The following is an example of a calculation to work out how much paint a 150m² home with a new galvanised corrugated iron roof will need:

For a 150m² home with a new galvanised corrugated iron roof will need.

Area + 40% divided by spreading rate gives the usual quantity of paint needed.

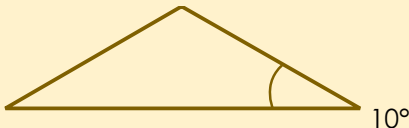

Basecoat $150 + (40\%) = 150 + 60 = 210$
 @12m² per litre $210 / 12 = 18$
 = 5 x 4 litre cans
 or = 2 x 10 litre pails

Primers / Basecoats need to be included in the calculation. For example on new roofs there is a **full** coat of primer/basecoat @ 12m² per litre.

and

Roofrite Topcoat $150 + (40\%) = 150 + 60 = 210$
 2 x coats @12m² each $210 / 6 = 35$
 = 4 x 10 litre pails

The following table may help you to determine how much paint you need.

Roof angle		Corrugated		Trough section	
 10°	Topcoat	18.6	2 x 10 L	25.4	3 x 10 L
	Basecoat	9.3	1 x 10 L	12.7	1 x 10 L 1 x 4 L
 20°	Topcoat	19.6	2 x 10 L	26.6	3 x 10 L
	Basecoat	9.8	1 x 10 L	13.3	1 x 10 L 1 x 4 L

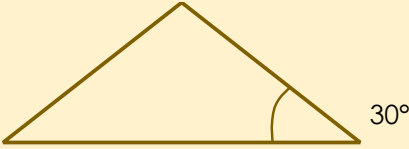
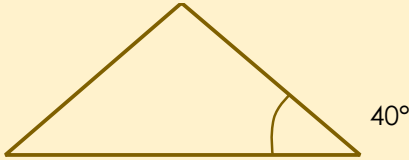


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 30°	Topcoat	21.3	2 x 10 L	28.9	3 x 10 L
	Basecoat/Primer	10.6	1 x 10 L	14.4	1 x 10 L 1 x 4 L
 40°	Topcoat	24.1	2 x 10 L 1 x 4 L	32.7	3 x 10 L 1 x 4 L
	Basecoat/Primer	12	1 x 10 L 1 x 4 L	16.3	1 x 10 L 2 x 4 L

Volumes estimated at theoretical coverages for respective paints.

We have based the measurements on a home with a ground floor area of 100 square metres and have factored in the slope of the roof and the type of roofing material used, corrugated iron or trough section roofing.

Take the size of your house and multiply the litres by the same factor and your best guess on the angle of the roof. So if the house is 170m² simply multiply the volume we have calculated by 1.7.

For example, if it has a 30° degree pitch and is corrugated then you will need 1.7 x 21.3 litres or 36.2 litres.



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3.0 Concrete Tile System

Concrete tiles are a popular roofing material and are usually left unpainted.

On weathering they become relatively porous and readily support moss and mould growth. Tiled roofs need to be steep, at least 30 degrees and this makes them difficult to walk on, clean and paint. Other than for cosmetic reasons there is no reason to paint them.

Concrete tiles in particular are not renowned for their attractiveness and this is not helped by the steep angle of the roof, effectively making it a dominant feature of most homes.

3.1 Stage 1 – Cleaning

1. Remove any large lichen and mildew growth with hand tools and apply CCM Roofwash at the recommended dilution rate.
- 2.
3. Clean the entire roof with 3000 psi water blasting.

3.2 Stage 2 – Repair/Priming

1. Repair and re-point ridge capping as quoted
2. Check and repair all roof flashings as quoted
3. Check and re-point edge tiles as quoted
4. Check and repair valley irons as quoted
5. Inspect all tiles and replace as required
6. Mask off required areas



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3.3 Stage 3 – Application

The coating system to be used depends on the tile surface condition. Very rough surfaces will require 2 coats of ROOFRITE Basecoat to achieve the desired finish.

1. Apply a coat of ROOFRITE Roof Sealer to the entire surface.
2. Allow this to dry for a minimum of 2 hours. Longer drying time may be required due to climatic conditions.
3. Apply one full coat of ROOFRITE Basecoat to entire surface (clear or selected colour).
4. Apply two coats of ROOFRITE Acrylic Finish (Gloss / Semi Gloss) to the entire surface (selected colour). Allow a minimum of 2 hours drying time between coats



Some tiles have a glaze coat and new paint will completely delaminate.
It is essential that an adhesion test be done prior to painting.

Some tiles may have a silicone based water beading / waterproofing coating to which prevent moisture penetration. Roofrite paint will not adhere to roofing substrate treated in this manner.

Take care when working on Concrete tiles, as they may easily break when walked on.

Spare Tiles

It is useful to provide the customer with 4 - 6 spray coated spare



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4.0 Galvanised Iron/Zincalume

4.1 Stage 1 - Cleaning

1. Remove any large lichen and mildew growth with hand tools and apply CCM Roofwash at the recommended dilution rate.
2. Clean the entire roof with 3000 psi water blasting.
3. Treat all rust areas with a rust converter and a zinc phosphate acid etch passivating primer acrylic, alkyd or polyvinylbutyrate type.

4.2 Stage 2 - Repair / Priming

1. Repair and replace damaged sheets as quoted.
2. Check, secure and/or replace all nails and/or screws as quoted.
3. Repair valley irons, flashings, edge moulds as quoted.
4. Mask off any required areas.

4.3 Stage 3 - Application

1. Previously painted iron roofs that are peeling should be washed and primed on the same day.
2. Apply a coat of ROOFRITE Galvanised Iron Primer* to the entire surface. Allow a minimum of 2 hours drying time. Longer drying time may be required due to climatic conditions.
3. Apply two coats of ROOFRITE Acrylic Finish (Gloss or Semi Gloss) to the entire surface. Allow a minimum of 2 hours drying time between coats.



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* For the majority of Galvanised Iron or Zincalume, CCM Zinc Prime (water based) is suitable, but some surfaces may require CCM Anti Corrosive Primer Grey (oil based) or CCM Rustcon, eg aged powder coated iron, steel, rusty iron etc.

Ensure that any areas of rust are cleaned and the appropriate rust treatment is applied.

Please establish the type of metal and age/condition & perform an adhesion test prior to paint application.



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5.0 Decromastic Tile

Decromastic tiles erode over time and homeowners eventually face the prospect of either replacing or painting. They are made from a pressed galvanised iron, which has had a bitumen basecoat applied over it, which in turn has stone chips embedded into it.

Over time the stone chips erode exposing the bitumen and eventually the galvanised iron, which will ultimately rust. Painting is relatively straightforward but the topcoats will need to be sprayed if a reasonable finish is to be achieved.

5.1 Stage 1 – Cleaning

1. Remove any large lichen and mildew growth with hand tools and apply CCM Roofwash at the recommended dilution.
2. Clean the entire roof with 3000 psi water blasting.
3. Treat all rust areas with a rust converter and ROOFRITE Galvanised Iron Primer.

5.2 Stage 2 - Repair / Priming

1. Repair and/or replace damaged tile sheets.
2. Replace and/or secure all tiles nails as required.
3. Check secure and/or repair valley irons, flashings and edge moulds.
4. Check secure and/or repair ridge capping.

5. Mask off any required areas.



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5.3 Stage 3 - Application

1. Spot-prime any bare areas of metal with ROOFRITE Galvanised Iron Primer. If rust is present, this may require treatment with rust converter/killer, then CCM Anti Corrosive Primer Grey (oil based)) or CCM Rustcon. Please establish the age & condition of the exposed areas, prior to paint application.
2. Apply a coat of ROOFRITE Basecoat and add dry chip into this coat. The use of a hopper gun will achieve even application. Allow to dry for a minimum of 2 hours, ideally 4 hours
3. Apply a mist coat of ROOFRITE Basecoat. The entire surface of the chip should now be fully encapsulated by the paint. Allow to dry for a minimum of 2 hours.
4. Apply two coats of ROOFRITE Acrylic Finish (Matt) to the entire surface.
5. Allow a minimum of 2 hours drying time between coats.



Ensure that any areas of rust are cleaned and the appropriate rust treatment is applied.



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6.0 Clay Tile

6.1 Stage 1 – Clean

1. Remove any large lichen and mildew growth with hand tools and apply CCM Roofwash at the recommended dilution.
2. Clean the entire roof with 3000 psi water blasting.

6.2 Stage 2 - Repair

1. Repair and re-point ridge capping
2. Check and repair all roof flashings as required
3. Check and re-point edge tiles as necessary
4. Check and secure valley irons
5. Inspect all tiles and replace as necessary
6. Mask off any required areas

6.3 Stage 3 - Application

1. Apply 1 coat of ROOFRITE Sealer (clear) to the entire surface. Allow to dry for a minimum of 2 hours. For aged or porous Clay tiles, apply 2 coats of Roof Sealer. The first coat should be thinned a minimum of 20% with clean water. Up to 50% thinning can be done with very aged or porous tiles.
2. Apply 2 coats of ROOFRITE Acrylic Finish (Gloss or Semi-Gloss) to the entire surface. Allow a minimum of 2 hours drying time between coats.



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For aged or porous tiles, apply 2 coats of Roof Sealer.
Take care when working on Clay tiles,
as they may easily break if walked on.

If you can walk a tiled roof, you can paint a tiled roof. However, you will have to do some preparation work before you haul the spray gun up on the roof. Constant exposure to the elements can cause tiles to fade, mildew to form and broken tiles to appear. Repair damaged tiles, clean the surface and apply an oil-based primer to get the roof ready to paint. Follow with two coats of exterior acrylic paint to ensure a long-lasting paint job.

6.2 Stage 1 – Setup / Access

1. Cut two sections of plywood, each measuring 2-foot by 2-foot, using an electric saw. Cut two pieces of carpet to fit the sections. Attach the carpet to the bottom of the plywood, using a hammer and capped roofing nails. Use the plywood to distribute your weight evenly across the roof tiles. Stand on one sheet of plywood until you are ready to walk. Move the free sheet to the next area and step onto it. Continue alternating the sheets as you move across the tiles.
2. Put on a roof harness. Set a ladder up straight on firm, level ground in an area containing a fixed object for anchoring. Leave 3 feet of the ladder extending above the edge of the roof. Stand on the bottom rung of the ladder and press down with both feet to set it firmly into the ground. Carry the plywood and two bungee cords up the ladder.



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6.3 Stage 2 – Repair

1. Lay the plywood on the roof with the carpeted side down. Hook the end of a bungee cord to the lip of the gutter and wrap it around the leg of the ladder. Fold the cord over the ladder and back around, making a full circle. Hook the opposite end of the cord to the gutter lip on the opposite side of the ladder. Climb onto the roof and inspect it for damages. Ensure to repair all broken tiles before you paint.
2. Carry rust remover, tape and painter's plastic onto the roof. Spray rusted valley irons with the rust remover. Cover vent pipes, sky lights and anything else that you don't want painted, using plastic. Secure the plastic with tape.

6.4 Stage 3 – Cleaning

3. Carry a rope and the wand and hose of a pressure washer up the ladder and onto the roof. Hook one end of the rope onto the harness and tie off the other end to a metal vent pipe or other fixed object on the roof. Have a helper turn on the power washer from the ground. Pressure-wash the roof to remove rust, dirt and mildew. Carry the wand and hose back down the ladder and allow the roof to dry completely.
4. Move vehicles away from the area and cover the ground with drop cloths. Cover everything that you don't want painted.

6.4 Stage 4 - Application

5. Fill a paint sprayer with primer. Carry the paint sprayer wand and the hose up the ladder and onto the roof. Anchor the harness with the rope. Have a helper turn the paint sprayer on from the ground. Start spraying primer at the ridge and work down the slope of the roof. Hold the wand about 1 foot from the surface of the roof and use smooth, side-to-side sweeping motions to apply the primer. Continue spraying until the roof has been covered with primer. Climb down and allow the primer to dry completely.



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7.0 COLORSTEEL®, COLORBOND®, COLORCOTE® Coil Coated

Both brands are owned by BHP, one of Australia's biggest companies and one of the world's largest producers of steel and steel products. COLORBOND® and COLORSTEEL® are the Australian and New Zealand brand names for some of their steel products, mostly roofing. They also produce flashings, fencing and the like.

COLORBOND® and COLORSTEEL® are sheets of Zinalume that have been coated with a factory applied, protective paint system. They are then formed into the finished products. For example, a window, roof flashing or a sheet of long run.

In most cases the roofer will order the roofing sheets cut to size, for example if the length is 4.2 metres the roofing contractor or builder may order their sheets of COLORSTEEL® roofing pre-cut to this length. COLORSTEEL® and COLORBOND® products come in different grades and colours, depending on customer choice and the level of protection needed. They also come with a very comprehensive warranty.

7.1 Stage 1 - Cleaning

Older COLORSTEEL® and COLORBOND® roofs will be faded and chalked and in severe cases, white rust and corrosion will be evident. Use CCM Roofwash to prepare the surface, scrubbing any white rust with a nylon Scotchbrite scouring pad, then pressure wash to clean.

New COLORSTEEL® and COLORBOND® roofs wash with CCM Roofwash, then pressure wash to clean.

7.2 Stage 2- Priming

Older COLORSTEEL® and COLORBOND® Prime the affected areas with CCM Zinc Prime (water based) or CCM Rustcon.



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New COLORSTEEL® and COLORBOND® or COLORCOTE® Topcoat with CCM Roofrite



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COLORBOND® is the Australian equivalent to COLORSTEEL®, COLORCOTE® is the Fletchers / Pacific Coil Coaters product equivalent to COORSTEEL®.

COLORSTEEL® and COLORBOND® profiles are usually either corrugated or Biga Rib.

NOTE: if there is delamination present, this could represent a COLORSTEEL® system failure.



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8.0 Other Roofing Materials.

8.1 General instructions

1. Wash/remove any chalkiness and dirt.
2. Any areas of rust must be treated with a rust converter/killer and then spot-primed with CCM Rustcon.
3. Perform an adhesion test by applying ROOFRITE Topcoat where the majority of fading/chalking was observed.
4. After a minimum of 2 hours, cut a cross (x) in the ROOFRITE Topcoat and firmly apply a strong sticky tape over the cross cut.
5. Immediately tear the tape off. If the paint comes off easily, then another adhesion test can be done using ROOFRITE Zinc Prime.
6. If the ROOFRITE Galvanised Iron Primer comes off easily, then an adhesion test with CCM Anti Corrosive Primer Grey (oil based) is required.
7. If the paint comes off easily, then an adhesion test can be done with CCM Rustcon. If this comes off easily, then the surface is not in a suitable condition for painting. Further cleaning may be required or the decision may be taken that the roof is completely unsuitable for painting.



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8.2 Asbestos cement/Super Six roofs



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Asbestos

Take extreme care when dealing with any Asbestos products. In some cases it is best not to paint at all and the asbestos surface should be replaced.

Follow OSH and local Council guidelines.



Repainting Micaceous, Metallic coatings

Painting over previous or weathered metallic coatings can be problematic.

It is essential that an adhesion test be done prior to any painting, as new coats of paint can put pressure on previous coatings then blister and peel off.

Asbestos was mixed in with cement to produce a relatively lightweight, fire resistant and durable roofing material, sold as tiles or more commonly as corrugated 'Super Six' roofing. Before production of asbestos containing products including roofing ceased in the early '80's, many warehouses, factories and other commercial buildings as well as a significant amount of New Zealand's and Australia's residential buildings were roofed using materials that contained asbestos.

Asbestos presents a danger to humans as ingestion of it may cause Asbestosis and other, usually respiratory illnesses. Asbestos fibres contained in products like 'Super Six' are 'safe' as long as they are not disturbed. This is why it is safe to have a Super Six roof but not to do anything to it that may disturb and dislodge any asbestos fibres.



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In practice this means water blasting or aggressive cleaning is not permissible. The same restrictions also

apply to old asbestos containing fibre cement sheets. Any residue from cleaning also needs to be collected and disposed of in accordance with local and national government regulations. Reroofing is an issue, with approved handlers required if the roofing is removed. Generally new roofing, COLORSTEEL® is usually laid directly over the top.

If you do want to paint an asbestos containing roof you may, but you will be very limited in how you prepare the roof. Saturate the surface with a Moss & Mould Killer and, using a hard bristled scrubbing brush, scrub the surface to remove both residual mould and moss and years of accumulated dirt and contaminants. The process will also dislodge asbestos fibres. The surface must remain wet while being cleaned and 'all' the scrapings, dirt, mould must be collected and disposed of correctly.

The surface should then be saturated with ROOFRITE® Acrylic Sealer and then painted with ROOFRITE® top coat. In reality this is very difficult to do and beyond most DIY customers. Our recommendation is that the roof is either replaced or sheeted over.

8.2 Bitumen

Fibreglass reinforced roofing membranes became available in the late 60's and early 70's bitumen was a coating for flat roofs – usually commercial. The attached photos show a typical flat roof coated in bitumen and the close up shows how it has cracked over time.

Please consult with the paint manufacturer technical department for advice on

8.3 Butynol Roofs

These are based on rubber compounds and are generally used on flat or almost flat roofs, including trafficable roofs or those that double as a deck. Often wooden decking or tiles are laid or placed over the top. This type of roof is often used on commercial buildings.

Please consult with the paint manufacturer technical department for advice on coating other roof

substrate types not covered in this guide on 0800 289 2726



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9.0 Safety

There is a very real place for professional roof painters where safety is concerned. Many roofs have difficult access or are very steep and dangerous for DIY painters. Many commercial painters would also turn down the opportunity to price a difficult roof repaint or simply subcontract the job to a painter who is better equipped and set up to complete the job. Most accidents occur not on the roof but getting up and down from it, usually on a ladder. The following is useful advice for anyone planning on using a ladder.

- Before getting on a roof think carefully about where to begin preparation and painting and most importantly, where to finish because when you need to be able to easily climb off.
- Ladders need to be at the proper angle, at least one metre out for every three metres of height.
- Ladders must have four contact points, two with the ground and two with the building.
- Ladders must have at least three rungs higher than the roof level to be able to step off and on safely.
- Ladders will crush plastic spouting a short length of timber inside the gutter will prevent this.
- Ladders need to be tied off at the top to prevent them slipping sideways and wind gusts blowing the ladder away.
- Ladders and power cables don't mix. Make sure that all access is well away from power lines. Aluminium ladders are particularly dangerous.
- If access by ladder is difficult, consider a tower scaffold to access the roof.

Once on the roof you should also consider and take the following safety issues into account.



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Always wear comfortable shoes with good grip. Quality rubber soles are best, plastic soles and stiff boots are

dangerous, thongs are useless and bare feet are worse. Roofs get very hot, so be careful to protect against sunburn. Start painting early and if practical work on the shady sides. Remember if it is that hot that it hurts to stand on, it's also too hot to apply paint.

Wet roofs are slippery! Be very careful when water blasting and watch out for dew on roofs. Also a primed surface will be more slippery than bare galvanised iron or Zinalume, so extra care needs to be taken.

A roof slope approaching 30° angle becomes very difficult to walk on and if the angle is any steeper then special equipment will be needed. A hooked roof ladder is useful for roofs that have an apex ridge. The hooked bracket is set over the ridge and moved along as sections are painted.

Steep roofs really need a professional approach, both in terms of safety equipment, such as harnesses and safety lines and the painting techniques used. If you have a steep roof obtain professional painting advice. Often the cost of a professional is a pleasant surprise and provides an expert response.

The applicator is responsible for applying the paint to the manufacturers recommended specifications as stated in the product technical datasheet. It is the applicators responsibility to ensure they are aware of the hazards associated with paint by obtaining and read the product safety datasheet. Datasheets can be obtained online from www.ccmcoatings.com



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10.0 Applicators Responsibilities

10.1 Mix

Mix all pails of ROOFRITE products thoroughly with a drill or plunger.

10.2 Box

To ensure colour consistency over several pails, box all same coloured pails together wherever possible.

10.3 Preparation

Thorough preparation is essential. After thorough cleaning, always ascertain the type and age of the existing coating and check its adhesion.

10.4 Weather

Check the weather forecast. Do not paint if rain, heavy dew or a sudden drop in temperature is likely during application or during the first 12 hours after painting.

During winter months – even on a 'good weather' day - painting late in the day can cause problems in the paint.

Roofrite products should only be applied when the temperature, of the surface to be painted, is no lower than 8°.

Heavy dew or rain during the first 12 hours after painting may wash the paint off.

Very cold temperatures will slow the curing time, can inhibit proper adhesion and can cause the paint to lose its gloss level.



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Other poor painting conditions like, high humidity (85% or above) or excessive wind, can also greatly compromise the painting project.

10.5 Site Safety

Follow all OSH and ACC recommendations regarding appropriate safety equipment and clothing.

10.6 Careful and Clean

Do not contaminate any water supply.

10.7 Workmanship

The standard of workmanship is to conform to the standard as set out in AS/NZS2311:2009 Guide to the Painting of Buildings.

10.8 Adhesion

It is the applicators responsibility to establish that the surface is suitable for painting by performing adhesion tests.

A new coat of paint can place force on an existing paint film. This may cause adhesion failure resulting in blisters and peeling.

Some tiles have a glaze coating and new paint will completely delaminate.

10.9 Coastal/Marine/Seaside

For coastal, marine or seaside locations (1km from the sea) apply 2 coats of the recommended Primer or Sealer. Wash in between all coats of paint to remove salt deposits.



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10.10 Follow all ROOFRITE instructions

Always apply the correct WFT (wet film thickness) to achieve the correct DFT (dry film thickness) as per the technical datasheet of each ROOFRITE product.

Datasheets are available on the CCM website: www.ccmcoatings.com

A simple test can be done by APCO to determine if the correct amount of paint has been applied or not. If insufficient paint has been applied, then the system is incomplete - so NO Product Guarantee applies.

Follow the entire systems in this guide. e.g. Do not skip the recommended sealer or primer coat, or applying a second topcoat. If the entire system is not used, then NO Product Guarantee applies.

10.11 Recoat Times

Always allow a minimum of 2 hours drying time between coats.

Longer drying time may be required due to weather conditions or the thickness of the product e.g. Basecoat.

10.12 Adhesion Test Procedure

1. Apply a small amount of paint to the surface to be painted.
2. Allow to dry for the recommended time eg for most water based products, leave for a minimum of 2 hours (in ideal weather conditions). If humidity is high or it is damp or raining, leave to dry for a minimum of 4 hours.
3. Cut a cross (X) shape thru the paint, then firmly apply a strong sticky tape over the cross cut.
4. Remove the tape. If it comes off easily, then further surface preparation and cleaning is required.
5. A full coat of a specific primer may also be required for proper adhesion of the entire paint system.



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11.0 Trouble Shooting & Potential Problems

11.1 Red Rusting

When the zinc coating eventually disappears, by slowly eroding with time, or is damaged, the exposed steel reacts quickly with the elements causing red rusting or oxidising. Because roofing materials are thin the condition is serious if not properly addressed.

Minor areas may be primed with rust inhibitor after removing loose rust. Roofs with extensive 'red' rusting need to be carefully assessed. Some may need to be entirely painted with galvanised iron primer.

Sometimes advice will be necessary to determine whether to re-roof or try a specialist coating system. Contact RAPCO Coatings (NZ) Limited in these situations.

11.2 White Rusting

White rusting is the visible white salts formed with zinc and surface moisture usually trapped between meeting surfaces, such as overlaps or under paint films. This must be removed to provide adhesion for paint systems and is best scrubbed off with a stiff brushing using APCO BIOwash followed by rinsing and drying before painting. 200 grit zinc stearate sandpaper is very effective as well, although very time consuming.

The two photos below both show white rust. The top of the galvanised roller door shows how white rust has formed in the top where it does not get rain washed and is subject to the prevailing wind meaning salts and other contaminants are 'blown' there and are not washed away. The second photo graphically shows white rust on a galvanised handrail. It is only a matter of time before red rust will also form.



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11.3 Roof Weathering / Ageing



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Anyone looking at painting a galvanised iron roof 30 years ago would have been advised to 'let it weather for 12-18 months before you paint it'. The theory behind this was that the roof primers available at that time did not adhere well enough to brand new galvanised iron but after 12-18 months the surface would have weathered sufficiently to allow primers to bite or key to the surface.

This advice was thrown out the door with the introduction of galvanised iron primers – a breakthrough, lead free primer with excellent adhesion to new galvanised iron. However while the advice to let your roof weather before painting is no longer valid, it is unfortunately still believed by many.

As the galvanised iron weathers it starts to corrode and zinc oxide (ZnO^2) or white rust starts to form. White rusted, galvanised iron is more difficult to prime and paint successfully.

It is recommended that new roofs are primed and painted as soon as is practical - they will last longer if they are.

11.4 Patchiness

A patchy look to the paint may occur under the following circumstances:

When paint is applied when the surface is too hot it becomes very difficult to maintain a wet edge. The addition of drying retarders and water will help, as will painting in a way to avoid lap marks and the wet edge problem.

If it is very hot when painting only paint one trough section at a time, from the apex of the roof to the gutter, rather than do two or three sections at a time. Remember to return to the top before starting the next section.



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11.5 Primer less Systems



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Some paint manufacturers offer paints that may be applied direct to galvanised iron and Zincalume without a primer.

While paint technology is improving all the time and primer less systems do have their place, they will not perform as well as if they were applied over a well primed surface for the following reasons:

Primers contribute to the system's film build, especially over edges where paint failures tend to occur first. Primer less systems encourage painters and DIY customers to take a shortcut and only apply two coats instead of the recommended three.

Primers are specifically formulated to cope with the characteristics of each substrate. Timber presents very different issues to that of concrete and/or galvanised iron.

Any product that is developed to be applied over a number of different substrates will mean compromises are made or potential issues will not be fully addressed. This applies equally to the topcoat as well as the primer.

11.6 Cold Conditions

Avoid painting in temperatures below 10 degrees or if it is likely to drop to this temperature before the paint dries.



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11.7 Hot Conditions



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Any roof paint when the roof surface is too hot may cause the paint to flash off (dry) too quickly, resulting in a weakened paint film. In extreme cases it will powder, lose adhesion and simply fall off. Previously painted roofs are particularly susceptible as they are typically darker than new unpainted Zincolume and therefore get very hot under direct sunlight.

Simply walking on them, even in shoes, is unpleasant. If a roof is too hot the addition of drying retarder additives will not be sufficient to avoid paint failures.

Avoid the heat of the day and avoid painting in direct sunlight. If the surface is hot to touch then it is too hot to paint.

NOTE: Freshly painted roofs may have a slight 'tack' on a hot day. This is because the paint film will still be is not really an issue.

11.8 Waterborne Paints going directly onto Galvanised Iron

This advice predates many of the so-called 'primeless systems' and is based on the fact that waterborne paints stick very well to weathered galvanised iron. Unfortunately they contained no anti-corrosive properties and allowed moisture to pass through and hasten the corrosion of the zinc layer. Once started it is only a matter of time before the waterborne paint starts to flake off.

11.9 Rusty Roofs

Rust on a roof is very difficult to deal with. If it is widespread and well advanced then replacement of the roof may be the best option. If it is a light dusting then an additional coat or two of a solvent based or water based galvanised iron primer will be sufficient. The rust may only be on the nail head (as in the photo right) or on a fitting (like a Sky receiver). Apply the primer direct to the rust affected area.



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Surface corrosion – the rust is visible on the surface but it is not affecting the integrity (or strength) of the steel.

Scrub thoroughly using a 3M scouring pad (a wire brush will simply remove a lot of the residual galvanising making the solution worse) and apply two or three coats of a CCM Anti Corrosive Primer Grey (oil based).

Here the rust is more obvious and advanced. Two coats of CCM Anti Corrosive Primer Grey will not be sufficient in this case. Wire brush or sand to remove the worst of the red rust but be careful not to damage the surrounding galvanised areas. Apply one to two coats of a CCM Rustcon to the rusted areas only. Rustcon does not adhere well to galvanising or waterborne paints so use it only on red rusted areas.

If the rust is well advanced, we would recommend the affected sheet is replaced.

11.10 Salts

Airborne salts are an issue for roofs for two reasons. Firstly when they are painted or repainted, salts may accumulate on the surface of the bare galvanised iron, Zinalume or the painted surface and unless washed off will cause corrosion to occur sooner than would otherwise be the case. Metals including iron, zinc and aluminium will corrode quicker if salt and moisture are present either on the surface of the metal or in the atmosphere. This corrosion process is accelerated further if they are both present.

The second issue is that salts gather in crevices and laps of the roof and again will cause corrosion, invariably on the underside of the overlapping sheet of roofing.

Salt must be removed between coats of paint and before applying a roof primer. In practice this means that the salt may need to be hosed off the roof between coats of paint or after preparation.



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11.11 Blisters

When painting in direct sunlight or on a very hot surface (like Galvanised Iron) blisters may form. This is because the outer layer of paint has dried too quickly and entraps solvents under the paint film before they have a chance to evaporate. As they try to escape, they form blisters.

Blisters can also be caused by paint being exposed to dew, high humidity, or rain soon after painting. Blisters may also occur if there is a contaminant on the surface that has not been removed prior to painting this would suggest insufficient cleaning or preparation.

11.12 Chalkiness

Painting over a chalky surface is likely to lead to paint system failure. Water blasting alone is not enough to prepare a chalky roof, it requires firm scrubbing to remove the loose particles, then water blasting. Check for further chalking by running clean fingers over the surface with moderate pressure. If chalking is still present, then further scrubbing can be done or an adhesion test can be tried with the primer or sealer that matches the ROOFRITE system you are using.

11.13 Painting in very hot conditions or direct sunlight

Do not paint in very hot conditions or direct sunlight. The paint will dry too quickly and not achieve proper adhesion - especially when painting galvanised iron. Painting in direct sunlight is also likely to cause a number of problems like these: alligatoring, blisters, crackling, flaking and wrinkling.



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11.14 Patchiness

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This is usually due to application technique or the temperature during the time of application. Ideally a Galvanised iron roof should be sprayed vertically - from top to bottom – not in wide sections. If spraying in sections, then a patchy finish is likely to be achieved.

If spraying Galvanised Iron in very hot weather, or the surface itself is hot, it may be difficult to maintain a wet edge and a patchy finish is likely to be achieved - especially in a Gloss finish but also in Semi-Gloss.

11.15 Poor adhesion / Peeling

Lose of adhesion or peeling is usually due to insufficient preparation and/or failure to do the appropriate adhesion tests prior to painting.

Glossy surfaces may require de-glossing or a suitable primer to provide adhesion to further coats. There may be a contaminant on the surface that has not been removed prior to painting due to insufficient cleaning. Water blasting alone is not sufficient to remove lichen, mould, moss, dirt, sea salts, or air pollutants that may have settled on the roof surface.

11.16 Rust

Rust is a serious issue and requires special attention. If rust is heavy and widespread, then the decision may be taken to re-roof rather than painting. If it is surface rust, then still extra care is required to prepare the surface. Remove as much rust as possible - taking care not to damage any clean, un-rusted galvanising. Treat any remaining rust with a suitable rust converter/killer such as CCM Rust Con then CCM Anti Corrosive Primer Grey (oil based) must be used, not ROOFRITE Zinc Prime. If a rusted roof is 1km from the coast, then 2 coats of CCM Anti Corrosive Primer Grey (oil based) is recommended.



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11.18 Windy days



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Do not paint on windy days. The paint will dry too quickly and not achieve proper adhesion. Also, wind increases overspray, resulting in unnecessary paint loss and possible damage/overspray on surrounding surfaces.

12.0 Maintenance Recommendations

As with all exterior paint systems, regular (ideally once a year) washing is recommended to get the best out of your Roofrite Coating System. Usually clean, fresh water is all that is required for the annual wash.

Pay attention to areas that do not get a lot of sunlight - such as areas that are often cold or dark. Dirt can accumulate in these areas. Dirt provides the perfect nutrient for mould & algae growth. The tiny roots that these organisms use to cling onto the roof surface can cause the paint coating to deteriorate very quickly if not regularly cleaned.

If lichen, moss, mould or airborne pollutants are likely, then an application of CCM Roof Wash is recommended at least every 3 years to keep these contaminants in check.



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13.0 Product Guarantee



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Please Note:

Regularly cleaning is part of the requirement for the APCO Product Guarantee to be applicable. Refer to Point 5 under the heading: This Guarantee does not cover.

13.1 The Product Guarantee

The Commercial Coating Manufacturers Ltd Product Guarantee is a **Product Performance Guarantee**.

APCO paints are developed, manufactured and Quality Tested in accordance to International Standards and will not flake, crack, peel or blister for the expected life of the paint system, provided the products are applied as per specification on the product Technical Datasheets, information provided on packaging labels and any relevant application guides.

13.2 Expected life of the ROOFRITE® Coating Systems:

- Concrete Tile System: 15 Years**
- Decromastic System: 15 Years**
- Galvanised Iron System: 10 Years** with the following restrictions:
- The roof must not have been painted before
- The zinc galvanising must be in good condition & less than 10 years old.
- If red rust is present anywhere on the roof – no warranty or guarantee.



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13.3 This Guarantee does not cover:

1. Minor colour fading or fair wear and tear.
2. Paint failure due to any breakdown of a previous coating.
3. Paint failure due to application of incorrect product or system to substrate.
4. Paint failure due to incorrect application technique.
5. Paint failure due to lack of recommended maintenance.
6. Paint failure due to mechanical damage.
7. Paint failure due to natural disasters.
8. Paint failure due to poor substrate condition.
9. Paint failure due to water leak issues caused by a construction or engineering fault.

**The entire, recommended ROOFRITE System MUST be used.

Disclaimer:



Please Note:

The recommendations in this guide cover basic ROOFRITE paint systems & project conditions, however it is impossible to cover all roof types, conditions & scenarios. Users of this Guide shall rely solely on their own professional judgement and skill in determining the appropriateness of using or referring to this guide and to satisfy themselves as to the accuracy of the data it contains. Users acknowledge that Commercial Coating Manufacturers Ltd is in no way liable in respect of any particular use or application of the material provided.

