

3M™ Scotchkote™ System Application Guide

High Performance 20/25* Year Waterproofing System For Asphalt & Felt Roofs

SKR.36AF2 - Issue 1

Surface Preparation & Cleaning	As required
Primer Application (where required)	3M™ Scotchkote™ WB Epoxy Primer GP 830 @ 40µ per coat Theoretical coverage rate at 40 µ is 11m ² /litre
Detailing and Joints	3M™ Scotchkote™ Poly-Tech EC 661 3M™ 1900 Duct Tape 3M™ Scotchkote™ Premier Reinforcing Mat 050 (10"wide)
Embedment Coat(s)	<u>Flat Deck:</u> 3M™ Scotchkote™ Poly-Tech EC 661 @ minimum 2.0 litre/m² 3M™ Scotchkote™ Premier Plus Reinforcing Mat 055 <u>Pitched Deck:</u> 1st Coat: 3M™ Scotchkote™ Poly-Tech EC 661 @ 0.5 litre/m² 2nd Coat: 3M™ Scotchkote™ Poly-Tech EC 661 @ 0.25 litre/m²
Finish Coat	3M™ Scotchkote™ Poly-Tech UV 662 @ 0.5 litre/m²
Walkways (if required)	3M™ Scotchkote™ Poly-Tech UV 662 @ 0.5 litre/m² 3M™ Scotchkote™ Granular Aggregate LD 092 @ 0.75 kg/m²
Skylights (if required)	3M™ Scotchkote™ Urethane Glass Coating 605 200 microns each side to conform to BS6206

If applied in accordance with this Application Guide, SKR.36AF2 has an expected service life of 20/25* years.

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Surface Preparation

Heavy deposits of dirt, silt and other contamination should be swept from the surface.

Surfaces should now be power washed and rinsed to remove all residual dirt and other contamination then allowed to dry.

Areas which have been subject to moss and lichen should now be treated with a proprietary fungicidal wash and allowed to dry in accordance with manufacturer's instructions.

Adhesion of the existing coating system, including solar reflective coatings, should be checked and all defective coating removed back to a firm edge, prior to being primed, as covered later in this guide.

Any chippings present should be removed with a mechanical flail. Deeply embedded chippings need not be removed, if removal would result in extensively damaging the asphalt.

Badly degraded asphalt should be removed.

Where asphalt has blistered, these should be cut open exposing the surface, which should be dried then rebuilt with a cementitious mortar.

Failure to remove all loose chippings will invalidate any offer of warranty.

Roofing felt should be inspected; weak and degraded felt should be replaced. Blisters in the roofing felt should be star cut, the exposed surface dried and the felt re-bonded to the substrate.

This system can extend up and over brick/concrete parapet walls if required. Any cracks in these surfaces should be cleaned out and filled with cementitious mortar in accordance with the manufacturer's recommendations and allowed to dry prior to coating with **3M™ Scotchkote™ Urethane Primer FB 856** in accordance with the product data sheet.

Any clean metal and fibreglass surfaces, such as flashings, etc should be primed with **3M™ Scotchkote™ Urethane Primer MC 135** in accordance with the product data sheet.

Corroded metal surfaces should be thoroughly wire brushed to remove corrosion products and then primed with **3M™ Scotchkote™ Urethane Primer MCU 125** in accordance with the product data sheet.

All wood or wood based materials should be primed with **Scotchkote Urethane Primer FB 856** in accordance with the product data sheet.

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Application of 3M™ Scotchkote™ WB Epoxy Primer GP 830 To Existing Coatings

All prepared soundly adhering existing coatings should be clean and dry.

Scotchkote WB Epoxy Primer GP 830 should not be applied at temperatures below 5°C, ideally substrate and atmospheric temperatures should be above 10°C.

Scotchkote WB Epoxy Primer GP 830 is a two component water based primer comprising a Part A (Base) and a Part B (Activator) component. The contents of the Part B (Activator) container should be added to the Part A (Base) container and stirred thoroughly to produce a homogeneous mix.

The product can be applied by brush, roller or spray. For brush or roller application, the product does not require thinning. Spray application may require the addition of 5-10% water depending on the equipment being used.

The recommended film thickness for **Scotchkote WB Epoxy Primer GP 830** is a nominal 90 microns wet to produce 40 microns dry.

The theoretical coverage rate at 40 microns is 11m²/litre.

Scotchkote WB Epoxy Primer GP 830 can be overcoated after a minimum drying interval of 24 hours at 20°C. The following overcoating intervals are given as a guide for different temperatures:-

	MINIMUM	MAXIMUM
10°C	48 hours	6 days
15°C	30 hours	4 days
20°C	24 hours	3 days
25°C	18 hours	2 days
30°C	12 hours	1 day

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Detailing and joints

All upstands, movement, cracks and expansion joints along with any other areas where movement could occur should first be covered with **3M™ 1900 Duct Tape** as a bond break detail.

It is not normally necessary to reinforce felt/carrier membrane overlap joints unless there is doubt about the integrity of the overlap.

The tape should be laid over the joint and pressed firmly onto the surface, with care being taken to ensure the edges of the tape are firmly adhered.

3M™ Scotchkote™ Premier Reinforcing Mat 050 should now be used as a reinforcement membrane over treated movement joints together with all angle joints with protrusions and upstands.

Scotchkote Premier Reinforcing Mat 050 should also be used to reinforce all valley gutters with the membrane being overlapped up onto the roof panels.

3M™ Scotchkote™ Poly-Tech EC 661 should be applied to the areas to be treated at a nominal rate of 8 linear meters per litre on joints and 0.7 litre/m² in gutters. **Scotchkote Premier Reinforcing Mat 050** should then be laid loosely over the **Scotchkote Poly-Tech EC 661** and then brushed through to totally wet out and encapsulate the sheet, taking care to encapsulate the edges. Adjacent lengths/sections of the mat should be overlapped to ensure a minimum 1-2 cm's (0.4 - 0.8 inch) overlap after coating.

Note: For treating joints, special 10in wide rolls of mat are available.

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Application of 3M™ Scotchkote™ Poly-Tech EC 661

Scotchkote Poly-Tech EC 661 should be applied to the remaining roof surface using medium pile rollers.

Pitched roofs only require local reinforcing, as described in the previous section. No further reinforcing is necessary.

For flat roof decks, **3M™ Scotchkote™ Premier Plus Reinforcing Mat 055** should be used as the reinforcing membrane over the entire roof surface.

Scotchkote Premier Plus Reinforcing Mat 055 should then be rolled out over the coated surface following the roof contours and rolled in to the wet **Scotchkote Poly-Tech EC 661**.

Adjacent widths of **Scotchkote Premier Plus Reinforcing Mat 055** should be overlapped to ensure a Minimum 1-2 cm's (0.4 - 0.8 inch) overlap after coating.

Scotchkote Premier Plus Reinforcing Mat 055 should also be overlapped 1-2 inches on to the treated reinforced up stands, parapets, joints and corners to maintain a continuous reinforcement.

A further application of **Scotchkote Poly-Tech EC 661** should be rolled through the **Scotchkote Premier Plus Reinforcing Mat 055** on any areas not completely wetted to totally encapsulate and impregnate the matting, if required.

For flat roof decks, the coverage rate of the **Scotchkote Poly-Tech EC 661** should be a minimum of 2ltr/m² with **Scotchkote Premier Plus Reinforcing Mat 055**. This coverage rate must be adhered to as closely as possible to ensure the correct film thickness of the embedment layer is achieved.

If the minimum spreading rate of 2 litre/m² is not achieved during the application of the embedment coat then to achieve the optimum performance of the system, a second coat of **Scotchkote Poly-Tech EC 661** should now be applied at a rate of 0.5 litre/m².

For pitched roofs, the coverage rate of the **first** coat of **Scotchkote Poly-Tech EC 661** will be 0.5 litre/m².

The coverage rate of the **second** coat of **Scotchkote Poly-Tech EC 661** will be 0.25 litre/m².

These coverage rates must be adhered to as closely as possible to ensure the correct film thickness of the embedment layer is achieved.

Scotchkote Poly-Tech EC 661 can be overcoated after a minimum of 16 hours @ 20°C. At lower temperatures, this time will be increased.

Provided surfaces are clean, there is no maximum overcoating time.

Please see the Notes section at the end of this guide concerning life expectancy.

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Application of 3M™ Scotchkote™ Poly-Tech UV 662

Prior to application of **Scotchkote Poly-Tech UV 662**, **3M™ Scotchkote™ Poly-Tech EC 661** must be dry and free from contamination.

Scotchkote Poly-Tech UV 662 is a single component high solids colour stable finish supplied ready for use.

Scotchkote Poly-Tech UV 662 should be applied by brush or roller, with rollers being preferred for large applications.

Scotchkote Poly-Tech UV 662 should be applied to give a uniform even coating totally obliterating the embedment coat at a nominal dry film thickness of 350 microns, this equates to a coverage rate of 0.5 ltr/m² on smooth surfaces.

Where slip resistant walkways are required, this can be achieved by the application of an extra coat of **Scotchkote Poly-Tech UV 662** incorporating an aggregate.

As soon as the overall coat of **Scotchkote Poly-Tech UV 662** is dry, approximately 6 hours at 20°C, a second coat should be applied to the designated area. **3M™ Scotchkote™ Granular Aggregate LD 092** should then be broadcast over the freshly applied product at a rate of 0.75kg/m².

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Application of 3M™ Scotchkote™ Urethane Glass Coating 605 (if required)

As soon as the 3M™ Scotchkote™ Poly-Tech UV 662 is dry as detailed previously, skylights can be treated with **Scotchkote Urethane Glass Coating 605**.

Surface should be clean and dry.

Scotchkote Urethane Glass Coating 605 should not be applied to areas which will be subject to condensation during its application and curing. The minimum surface temperature for application is 2°C with a maximum relative humidity of 85%, surfaces should also be a minimum of 3°C above the dew point.

Scotchkote Urethane Glass Coating 605 is a single component elastomeric coating supplied ready for use, requiring only stirring to incorporate any slight separation prior to use.

Scotchkote Urethane Glass Coating 605 should be applied by brush, roller or spray to give a uniform even film thickness of typically 200 microns dry. For spray application the product will require thinning by up to a maximum of 20% with **3M™ Scotchkote™ Thinners PU71**.

Multiple coats of **Scotchkote Urethane Glass Coating 605** may be required to achieve the required thickness depending on application method and quality of finish required. Subsequent coats can be applied after the minimum overcoating times listed below. There is no maximum overcoating time as long as surfaces are clean and dry.

Scotchkote Urethane Glass Coating 605 is touch dry after 2 hours, hard dry after 16 hours and achieves full cure after 7 days at 20°C. The following table is given as a guide for different surface temperatures.

	TOUCH DRY	MINIMUM OVERCOATING (Hard Dry)	FULL CURE
5°C	8 hours	48 hours	28 days
10°C	4 hours	32 hours	14 days
15°C	3 hours	24 hours	10 days
20°C	2 hours	16 hours	7 days
25°C	1½ hours	12 hours	5 days
30°C	1 hour	8 hours	3 days

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Notes

* - Life Expectancy

This relates to a conventional style roof with only limited pedestrian access.

The flat deck thicknesses and matting will give the system an expected service life of **25 years**.
The pitched deck thicknesses will give the system an expected service life of **20 years**.

Document References

3M™ Scotchkote™ WB Epoxy Primer GP 830 Product Technical Data Sheet
3M™ Scotchkote™ Poly-Tech EC 661
3M™ Scotchkote™ Poly-Tech UV 662

LRWA Code of Practice Roofs - Specification & use of
Liquid Applied Roofing Systems, Guidance Notes 1-6.

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