3M™ Scotchkote™ System Application Guide

Coating Of Previously Painted Concrete, Dense Concrete & Tiled Floors

SKF.21 - Issue 3

Surface Preparation and Cleaning	As required
Concrete Repairs - Where Required	3M Scotchkote Epoxy Concrete Repair PR 415 Theoretical coverage rate at 6mm is 0.08m²/kilo
Primer Application	3M Scotchkote WB Epoxy Primer GP 830 @ 40 microns dft Theoretical coverage rate at 40 microns is 11m²/litre
Finish Application	3M Scotchkote Epoxy Floor Coating HB 850 @ 200 microns dft Theoretical coverage rate at 200 microns is 5m²/litre
UV Stable Top Coat - Where Required	3M Scotchkote Urethane Coating XF 129 @ 50 microns dft Theoretical coverage rate at 50 microns is 11m²/litre

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Surface Preparation

Oil and grease spots and spills should be removed by detergent washing, solvent washing or sweating out with hot compressed air prior to the following methods of surface preparation.

All floor areas subject to wet service conditions must be thoroughly prepared by abrasive blasting.

Prior to any coating, the concrete should be dry and the moisture content should be checked using a proprietary surface moisture indicator, such as an Elcometer 7420 Digital Moisture Meter. When tested in accordance with the manufacturer's instructions, the reading should be classified as 'dry.'

Existing Coatings:
The adhesion of the existing coating should be checked and where loosely adhered, should be removed back to a firm edge and all loose dirt and debris removed.

Sound coatings should be lightly abraded using 240 grade abrasive paper, then degreased with **3M™ Scotchkote™ 020 Cleaner** or another approved floor cleaner.

Finally surfaces should again be detergent washed, rinsed and allowed to dry.

If the surface preparation stage causes the underlying concrete to be opened up and made porous, the surface should be primed with **3M™ Scotchkote™ Epoxy Sealer 810** as detailed in **Scotchkote System Recommendation SKF.26**, which is available on request.

Dense/Power Floated Concrete:
New concrete should be fully cured.

Surfaces should be thoroughly detergent cleaned to remove all oil and grease.

All concrete should ideally have an effective damp proof membrane.

Surfaces should then be prepared by diamond grinding, light abrasive blasting, mechanical wire brush or high pressure water jetting, to remove any laitance.

All dust and loose material must be removed by sweeping or vacuum cleaning.

Tiled Surfaces:
Surfaces should first be thoroughly detergent-washed, rinsed and allowed to dry to remove all oil, grease and other contamination, taking care to ensure all grout lines are thoroughly clean.

Where the floor will be operating in a total dry environment no further preparation is needed, however for floors operating in a wet environment or subject to regular washing, surfaces should be lightly abrasive blasted using enclosed blasting equipment or abraded using diamond grinders to provide a key. All dust and debris should then be removed by sweeping from the surface.

NOTES:
Damaged and eroded areas should be repaired using **3M™ Scotchkote™ Epoxy Concrete Repair PR 415** in accordance with the product technical data sheet and as described later.

The use of scabbling equipment is not recommended.

Uneven or rough surfaces should be planed flat/smooth. Rough surfaces may induce unnecessary wear on peaked areas.

Any mastic within expansion joints must be removed prior to coating. This can be replaced where necessary after the flooring system has fully cured.

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Application Of Scotchkote Epoxy Concrete Repair PR 415 - Where Required

Surfaces should be clean and dry.

Epoxy Concrete Repair PR 415 is a three component epoxy screed comprising a Part A (Base), a Part B (Activator) and graded Aggregate components. The Part A (Base) and Part B (Activator) components must be mixed together first, before adding the graded Aggregate. To ensure complete mixing of large quantities it is recommended that a mechanical mixer of the Mixal, Hobart or Danes type is used. Mix for at least 3-4 minutes after all the Aggregate is added.

The mixed **Epoxy Concrete Repair PR 415** should be used within 25 minutes of mixing.

Epoxy Concrete Repair PR 415 should be compacted into the area to be repaired and floated flush with the surface of the surrounding floor.

Epoxy Concrete Repair PR 415 can be overcoated as soon as it becomes hard dry, normally 3½ hours at 20°C.

The typical film thickness is 6mm. Theoretical coverage rate at 6mm is 0.08m²/kilo

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Application Of Scotchkote WB Epoxy Primer GP 830

Prepared surfaces should be clean, dry and free from contamination.

WB Epoxy Primer GP 830 should not be applied when humidity exceeds 85% or at temperatures below 5ºC. Ideally substrate and atmospheric temperatures should be above 10ºC.

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.

WB Epoxy Primer GP 830 should be applied by brush, roller or spray to the specified film thickness. For brush or roller application the product does not require thinning. Spray application may require the addition of 5-10% clean water, depending on the equipment being used.

WB Epoxy Primer GP 830 should be applied to give a good even coating at a nominal wet film thickness of 90 microns to leave a dry film thickness of 40 microns.

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

WB Epoxy Primer GP 830 can be over coated after a minimum drying interval of 8 hours and within 3 days at 20ºC. The following over coating intervals are given as a guide:-

	MINIMUM	MAXIMUM
10°C	16 Hours	6 Days
15°C	12 Hours	4 Days
20°C	8 Hours	3 Days
25°C	5 Hours	2 Days
30°C	4 Hours	1½ Days

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Application Of Scotchkote Epoxy Floor Coating HB 850

The primed surface must be dry and free from contamination.

Epoxy Floor Coating HB 850 is a two component solvent free coating comprising a Part A (Base) and a Part B (Activator) component. The Part A (Base) component should be stirred, then whilst continuing stirring the contents of the Part B (Activator) component container should be added and thoroughly mixed. After mixing, the product should be transferred to a clean container and the Part A (Base) container scraped out and further mixing carried out.

Epoxy Floor Coating HB 850 should be applied by brush or roller within 45 minutes of mixing at 20°C, at a nominal wet film thickness of 200 microns.

Care should be taken during application to ensure that an even coating thickness is achieved and excessive build up is avoided.

The theoretical coverage rate at 200 microns is 5m²/litre

Where a slip deterrent finish is required, **3M Scotchkote Granular Aggregate HD 091 or LD 092** should be scattered onto the freshly applied coating and back rolled in.

NOTE: For complex areas it is advisable to use two or more applicators with the mixed product being split into smaller portions, hence avoiding material becoming unusable before the full unit is applied.

Where a second coat of **Epoxy Floor Coating HB 850** is required, this can be applied after a minimum drying interval of 16 hours and within 3 days at 20°C. The following table gives overcoating and cure times at different temperatures.

	MINIMUM	MAXIMUM
10°C	32 hours	6 days
15°C	24 hours	4 days
20°C	16 hours	3 days
25°C	12 hours	2 days
30°C	8 hours	1½ days

Epoxy Floor Coating HB 850 is suitable for dry service after 24 hours curing at 20°C. Where areas are subject to wet service conditions or regular washing, they should be allowed to fully cure for 5 days at 20°C before being returned to service.

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Application Of Scotchkote Urethane Coating XF129 - Where Required

The surfaces must be dry and free from contamination.

Urethane Coating XF 129 is a two component solvent based finish comprising a Part A (Base) and a Part B (Activator) component. The Part B (Activator) should be added to the Part A (Base) component and mixed thoroughly to produce a homogeneous material, prior to use.

Urethane Coating XF 129 can be applied by brush or roller. Good quality lambswool/mohair rollers produce the best results with this method of application.

Urethane Coating XF 129 should be applied to give a smooth, even finish, at 90 microns wet to give 50 microns dry. Regular checks should be carried out to ensure the correct specified film thickness is applied.

The theoretical coverage rate at 50 microns is 11m²/litre.

The applied system is suitable for pedestrian service after 24 hours curing at 20°C but should be allowed to fully cure prior to exposure to wet service conditions. Where temperatures during curing are between 10°C - 15°C the system should be allowed 48 hours before being put back into service.

	HARD DRY	FULL CURE
10°C	48 Hours	20 Days
15°C	36 Hours	15 Days
20°C	24 Hours	10 Days
25°C	18 Hours	7 Days
30°C	12 Hours	4 Days

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Notes

Document References

Scotchkote Epoxy Concrete Repair PR 415	Product Technical Data Sheet
Scotchkote WB Epoxy Primer GP 830	
Scotchkote Epoxy Floor Coating HB 850	
Scotchkote Urethane Coating XF 129	

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