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Flexible Membrane

Preparation, Application and Use guide

Preparation

New concrete

New concrete must be left to reach an acceptable hardness before any preparation is attempted. Surface laitance should be removed by light vacuum shot blasting, scarifying or surface grinding. The use of acid etch solutions is not recommended.

Old concrete

On lightly stained concrete the removal of the surface layer would be sufficient preparation.
Areas of heavy staining should be treated by one or more of the following methods, vacuum shot blasting, scabbling or hot compressed air burning. Consultation with a trained specialist is strongly recommended to establish the most apt method. With all the above techniques, pre cleaning of heavy deposits of oil or grease with a suitable multipurpose degreaser then rinsing with clean towns water will reduce the transmission of contaminants to other areas during final preparation.

Expansion joints should either be raked out or protected during the preparation and coating processes.

Conditions

Prior to the application of Flexible Membrane, the surface must be clean, dry and sound.
The air and surface temperature must be above the minimum required both during application and the curing process.
The use of naked flame heaters is not advisable as they increase the relative humidity to a point which condensation can form on the cured Flexible Membrane leading to reduced adhesion of any subsequent application.

Mixing

Flexible Membrane is supplied in pre weighed units this ensures the correct ratio of base to activator is achieved, the splitting of packs is not recommended. Only mix as much material that can be applied during the stated working life. Diluents or solvents must not be added to Flexible Membrane in any circumstance.

To ensure correct mixing, a helical paddle attached to a slow speed drill or mixer is recommended.
Pour the Part B component into the Part A container, removing as much Part B component as is practically possible. Once all the Part B component has been transferred to the Part A container, mix at a controlled speed until homogeneous. Moving the paddle gently across and round the mixing vessel will stop dead spots occurring. Excessive speed or movement of the mixing paddle will result in air entrainment which can affect the coating film.
After mixing, to maximise the working life of the product, transfer into several smaller containers, this will help dissipate any heat build up in the bulk material.

Application

Flexible Membrane is applied as either a one or two coat application depending on the surface finish or condition of the base slab. Unlike conventional priming systems Flexible Membrane is designed to act as a movement or shock absorber. This reduces the transmission of hairline and stress cracks through to subsequent coatings or the de-bonding of flexible adhesives and coatings.

One Coat Application

One coat application should only be carried out on substrates that are smooth, free from serious defects such as stress cracking, heavy blast profile or erosion. Apply by either short pile mohair roller or pour the mixed Flexible Membrane directly onto the area to be treated and spread using a rubber edged squeegee or trowel to give the required film thickness. Working in regular blocks will help to reduce the possibility of missed areas especially in low light conditions. A minimum application rate of 4 square metres per kilo is required.

Two Coat Application

Apply by brush or short pile mohair roller to give an even, smooth finish, reducing the possibility of bubbles forming within the film. The use of a roller tray or scuttle is advised, as pouring the material directly onto the area to be treated then rolling out will result in uneven film thickness, giving low coverage rates and a patchy appearance to the finished coating. When applying two coats, the second coat if possible should be applied at 90 degrees from the direction of the first, this minimises the possibility of missed areas.

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Two Coat Application cont.

Minimum application rates of 5 square metres per kilo for the first coat and 5 square metres per kilo for the second are required.

On very uneven or porous surfaces the practical coverage rate can be significantly reduced, also in some instances a patchy appearance is obtained in the finished coating resulting in the need to apply a further coat.

Over Coating Or Subsequent Installations

Coatings or adhesives should be applied to Flexible Membrane within 5 days of the application of the final coat. Should over coating not be carried out within 5 days the surface must be lightly abraded to remove the surface gloss and a mechanical key obtained. If required a suitable bonding primer can be applied onto the cured Flexible Membrane to increase the level of adhesion with subsequent applications.

Once Flexible Membrane has cured it is compatible with most coatings and adhesive systems.

Over coating can be performed once the Flexible Membrane Coat film has reached sufficient hardness to be walked on without the risk of causing physical damage. Typical over coating time at temperatures above 10° Celsius would be 14 hours or overnight curing.

Other Uses

Flexible Membrane can also be used to produce flexible repair mortar, expansion joint filler or bedding compound simply by adding a suitable aggregate to the mixed material.

Repair Mortar

Add 30 mesh sharp sand or aggregate to produce a stiff paste and apply as required.

Expansion Joint Filler

Add fine silica flour or similar at the rate of 3 parts mixed Flexible Membrane to 2 parts filler and pour directly into the prepared joint, if required a pre dispersed epoxy colour paste can be added.

Bedding Compound

Add 2 part 30 mesh sand and 1 part silica flour to 3 parts mixed Flexible Membrane and flow into the void ensuring all entrained or trapped air are removed. This mix is suitable where light to medium vibration is expected.

Impact Pads

Add 1 part 30 mesh granulated rubber to 3 parts mixed Flexible Membrane and apply by trowel to the prepared surface at a minimum thickness of trowel of 5 millimetre thickness, priming of the substrate is not required.

Storage Conditions

Unless stated on the product technical data sheet all Merlin products have a shelf life of up to 2 years when stored in unopened containers with normal warehouse conditions.

Minimum storage temperature 5° Celsius
Do not expose to direct heat or sunlight
Keep away from sources of ignition
Keep dry
Do not allow to freeze