TECHNICAL BULLETIN – TB127

INSTALLATION OF BITUMEN SCREED FOR BITUMEN MEMBRANE

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INTRODUCTION & SCOPE

The installation of bitumen torch-on membranes is frequently required in both new construction and, particularly, restoration work, where leveling or shaping to falls is frequently a prerequisite. Most installations also require the formation of a coved section at corners to facilitate sound installation of the membrane system.

A bitumen screed and coving mix provides total compatibility between the membrane and the screed/cove, optimum bonding strength, and ease of application of the membrane system.

The purpose of this Bulletin is to detail the installation of a bitumen-modified screed and coving material suitable for use in conjunction with bitumen torch-on sheet membranes.

SCREED PREPARATION

The screed is required to withstand the effects of the torch's heat and be flexible enough to avoid cracking at a later stage. It must also be 100% compatible with the bitumen sheet.

GAUGING SOLUTION

A gauging solution is prepared by mixing 3 volumes (60%) of clean, fresh water with 2 volumes (40%) of ARDEX WPM179. The solution must be thoroughly mixed to a homogeneous solution.

SCREED/COVING MIX

Three volumes of river-washed sand are blended with one volume of Portland cement (3: sand/cement mix) to achieve a uniform mix. The pre-prepared gauging solution is then blended with the sand/cement to form a screed/coving mix of workable consistency suited to the installation.

SURFACE PREPARATION

The surfaces to which the screed is to be applied must be dry since the water-resistant screed will principally retain any moisture within the substrate. If surfaces cannot be dried, the torch-on bitumen sheet membrane system should incorporate a base primer layer of ARDEX WPM300 HydrEpoxy.

The bitumen-modified screed can be applied over most surfaces, including aged mineral-finished bitumen membranes, bitumen or asphalt-contaminated surfaces, and surfaces contaminated with other types of membranes (excluding moisture-cured or elastomeric polyurethanes).

All loose material, such as mineral chips, pebbles, etc., should be removed and the surfaces cleaned.

SCREED INSTALLATION

PRIMING

All surfaces to be treated should be primed using the gauging solution prepared above for the preparation of the screed. Allow the primer to dry before proceeding.

SLURRY COATING

Applying a thin slurry layer over low profile protrusions can further dilute the screed mix using the gauging solution to a thick slurry consistency. This can then be applied to the primed surface using a squeegee to produce a smooth, uniform to-plane surface.

SCREEDING

Screed surfaces using a steel trowel to achieve required falls. The screed can be applied at a thickness of up to 15mm in one application. If greater thicknesses are required, up to 40mm, allow the first layer to dry before applying subsequent layer(s) at a thickness of up to 15mm per layer.

Layer thicknesses of 40mm or greater should be reinforced with a 5 - 8mm steel mesh reinforcing.

The bitumen-modified screed is very easy to lay and finish with excellent bonding capabilities, workability, and lubricated trowel finishing qualities.

Allow the final screed to cure for at least 48 hours before installing the bitumen sheet membrane system.

COVING

The same mix described above, prepared in a slightly more bodied form, is used for the coving installation. The coving is installed after the screed has been completed.

Prime any areas of exposed substrate (excluding bitumen screed surfaces) using the gauging solution blended to form the screed mix. Allow the primer to dry before proceeding.

Install a 30 - 50mm cove in all corners where the bitumen sheet membrane will be installed. The cove is easily formed using a coving trowel and should be finished to ensure a smooth surface interface between it and adjacent surfaces.

Allow the final coves to cure for at least 48 hours before installing the bitumen sheet membrane system.

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