

1.CHARACTER OF THE ISSUE - REQUIREMENTS

Waterproofing flat roofs using bituminous membranes has been a prevalent solution for many years. However, numerous aging waterproofing layers composed of these membranes now require replacement or repair.

If the condition of the bituminous membranes permits, it may not be necessary to completely dismantle and replace them with a new sealing layer of bituminous membranes or alternative waterproofing materials. Instead, local repairs can be conducted, followed by the application of a new universal waterproofing layer over the existing membranes.

In addition to ensuring complete watertightness, this new waterproofing layer must demonstrate excellent adhesion to the substrate of the bituminous membranes, as well as reliability, durability, elasticity, and resistance to weathering.

3.APPLICATION

Preparation of the substrate

Initially, repair any necessary areas of the bituminous membranes by reattaching detached sections using cold-applied materials like **PC-Mastic®01** or **PC-Mastic®02**. For larger separations, use a blowtorch to re-adhere membranes to the substrate. Finally, clean the surface of loose materials to ensure proper adhesion and performance.

Surface priming

Once the materials potentially used for repairs have dried, the single-component, water-soluble polyurethane primer, **PC-Prime® PU 20**, is to be applied to the clean and dry surface of the bituminous membrane. This water-soluble polyurethane primer should be applied uniformly across the entire surface using a brush, roller, or spray method.

2.SOLUTION

The requirements are comprehensively met by the one-component polyurethane liquid membrane, **PC-Sealcoat®PU 110**. This product forms a continuous, elastic membrane that boasts exceptional mechanical strength, with no joints or seams. It is suitable for universal waterproofing of roof surfaces as well as for localized waterproofing needs. Additionally, it demonstrates high resistance to standing water, making it an appropriate choice for flat roofs where such conditions may arise due to inadequate slope.

Its ease of application further establishes it as an ideal solution for subsequent waterproofing of flat roofs, as well as for the repair of existing waterproofing layers made from bituminous membranes.

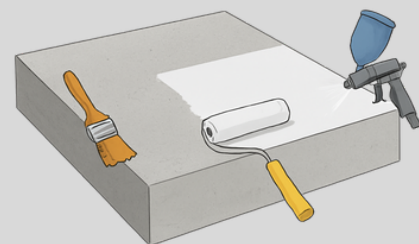
Solution Type:

Polyurethane Flexible Coating for old or New Bitumen membrane Surfaces:

PC-Sealcoat® PU 110

Surface Primer: **PC-Prime® PU 20**

Joint Sealing : **PC-Seal Tape® Flex**



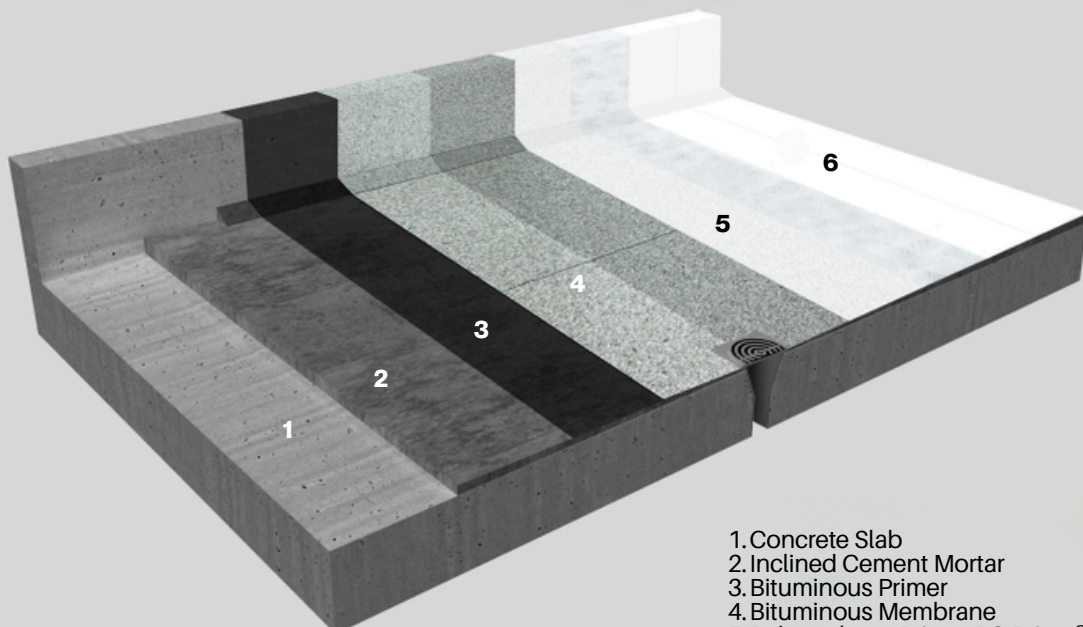
4. WATERPROOFING WITH PC-SEALCOAT® PU 110

The initial application of the polyurethane waterproofing liquid membrane, **PC-Sealcoat® PU 110**, involves covering the reinforcement with a width of 100 cm. While the membrane is still fresh, a strip of polyester fabric, known as **PC-Seal Tape® Flex**, is embedded into it. This application method is consistently applied to the remaining surface. Once this layer has cured—typically within 8 to 24 hours, depending on weather conditions—two additional layers of the **PC-Sealcoat® PU 110** membrane are applied across the entire roof surface, ensuring complete coverage of the reinforcement. The second coat may be applied as soon as the first has dried, again within the 8 to 24-hour timeframe dictated by environmental factors.

The total consumption of the polyurethane waterproofing liquid membrane, **PC-Sealcoat® PU 110**, ranges from 1.3 to 1.5 kg/m², contingent upon the substrate. Waterproofing should extend to vertical surfaces, such as parapets and stairwell terminations, to a minimum height of 15 to 20 cm to create a watertight basin.

It is advisable to reinforce **PC-Sealcoat® PU 110** with polyester fabric along the edges, particularly at the junctions of the flat roof with vertical elements (e.g., parapets and stairwell terminations), as well as at pipe joints, ventilation joints, and metal connections.

POLYURETHANE LIQUID MEMBRANE APPLIED ON EXISTING BITUMINOUS MEMBRANES



1. Concrete Slab
2. Inclined Cement Mortar
3. Bituminous Primer
4. Bituminous Membrane
5. Polyurethane Primer PC-Prime® PU 20
6. Polyurethane Coating PC-Sealcoat® PU 110