



WATERPROOFING

APPLICATIONS

CIVIL ENGINEERING

ALSAN CIVIL SBS 1

SYSTEM SHEET 211124SCANE

(supersedes -)

DESCRIPTION

ALSAN CIVIL SBS 1 is a hybrid waterproofing system based on SBS-modified bitumen. Details and upstands are done using liquid PMMA resins. This system is designed to waterproof engineering structures, such as concrete overpasses and bridges, at low cost while ensuring a seamless finish to the surface and upstands.

SYSTEM COMPONENTS

- **ALSAN CIVIL Z71** is a two-component PMMA-based microcrack filler.
- **ANTIROCK PRIMER** is a mix of SBS-modified bitumen, fast-evaporating solvents, and adhesion-enhancing additives. It is used as a primer on horizontal surfaces.
- **ANTIROCK STARTER** is a heat-weldable waterproofing membrane with a 75 mm (3 in) seldedge on each side. It is used as the starter membrane for the **ANTIROCK** membrane.
- **ANTIROCK** is a heat-weldable waterproofing membrane composed of SBS-modified bitumen and a non-woven polyester reinforcement.
- **ALSAN CIVIL P70** is a two-component translucent PMMA-based primer.
- **ALSAN CIVIL 773** is a two-component PMMA-based resin used as a waterproofing membrane for details, upstands, and horizontal surfaces.

OR

ALSAN CIVIL 773 SP is a three-component PMMA-based spray resin used as a waterproofing membrane for details, upstands, and horizontal surfaces.

SURFACE PREPARATION

Preparation of Concrete Surfaces:

1. Before the installation of the coating system, the concrete must be completely cured (28 days) with a minimum hardness of 24 MPa (3,500 psi). The substrate must be clean, sound, dry and free of loose materials, grease, laitance, and any other contaminants that may affect the performance of the product.
2. The concrete surface must be prepared so that it is equivalent to the ICRI CSP Profiles 3, 4, or 5. The steel shot blasting method is recommended to obtain these profiles and eliminate any trace of contamination on the surface.
3. The concrete substrate must have a maximum moisture content of 5% (ASTM F2659) or 1.5 kg/100 m² in 24 h (ASTM F 1869) or an internal relative humidity content of 75% (ASTM F2170).
4. Cracks larger than 1.6 mm (1/16 in) but no more than 3 mm (1/8 in) in width must be repaired using **ALSAN CIVIL Z71**.
5. If necessary, larger concrete repairs can be done using a mixture of **ALSAN CIVIL P70** and silica sand following the instructions below (see page 2):

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SURFACE PREPARATION *(Following)*

- The crack or surface to be repaired must be clean, sound, dry and free of loose materials, grease, laitance, and any other contaminants that may affect the performance of the product.
- The contact surface must be coated with **ALSAN CIVIL P70** catalyzed resin without the addition of silica sand.
- Then prepare a batch of **ALSAN CIVIL P70** in which silica sand will be incorporated. SOPREMA suggests one part of resin for two parts (by volume) of sand (ratio = 1:2).

Note: The proportions of the mixture can vary according to the preferences of the applicator. The size of the sand can also vary and thus affect the state of the mixture. Finer sand will result in a smoother finish, while coarser sand will result in a grainier finish.

- Apply the mixture to the surface previously coated with **ALSAN CIVIL P70** resin (still wet) using a spatula or any other tool allowing the applicator to obtain an even surface levelled with the surrounding surfaces.

- Limitations:**
- For repairs of more than one square foot, the maximum working depth must not exceed 12 mm (1/2 in).
 - If the repair to be carried out represents more than a square foot and more than 12 mm (1/2 in) in depth, a successive number of coats must be applied, always limiting each application to 12 mm (1/2 in). There is no limit as to the number of layers that can be applied one after another. The respective curing time of the previous layer must, however, be respected before proceeding with the application of the next layer.
 - If the repair area reaches a depth of less than 12 mm (1/2 in), there will be no limitation in terms of the extent of the area to be repaired.

Preparation of Steel Surfaces (such as drains, anchors, etc.):

1. The substrate must be clean, sound, dry and free of loose materials, grease, and any other contaminants that may affect the performance of the product. The surface must be cleaned using non-greasy solvents, such as acetone or methyl ethyl ketone (MEK).
2. The surface profile must allow sufficient adhesion of **ANTIROCK PRIMER** or **ALSAN CIVIL P70** to steel. A peel test can be carried out to validate proper adhesion to the surface.



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SYSTEM APPLICATION

PRIMER
(horizontal surface)

ANTIROCK PRIMER

- Once the surface preparation is complete, prime the horizontal surfaces using the ANTIROCK PRIMER. Using a low-speed mechanical stirrer (200 to 400 rpm), thoroughly mix the entire contents of the container for 2 to 3 minutes before each use.

Apply the ANTIROCK PRIMER on the substrate with a roller or a brush.

The primer must be dry before applying the waterproofing membrane.



NOTE: - The primer is a highly flammable product. Store away from direct sunlight and from any flame.
- The product is harmful by inhalation, skin contact, and ingestion.

WATERPROOFING MEMBRANE
(horizontal surface)

ANTIROCK

- When the ANTIROCK PRIMER is completely cured, install the ANTIROCK and ANTIROCK STARTER waterproofing membranes.

These membranes must be installed by heat-welding on a dry substrate using automated equipment (MACADEN or MINI-MACADEN) or with a propane torch.

Longitudinal overlaps should be at least 75 mm (3 in) and transverse overlaps should be at least 150 mm (6 in).

Ensure a continuous bead of melted bitumen with a minimum width of 6 mm (1/4 in) on each side of the membrane.

(Maximum covering time: 72 h).

PRIMER
(details & upstands)

ALSAN CIVIL P70

- Once the horizontal surfaces are completed, prime the surface of the details and upstands using ALSAN CIVIL P70. Using a low-speed mechanical stirrer (200 to 400 rpm), thoroughly mix the entire contents of the resin container for 2 to 3 minutes before each use, and before pouring the resin into a second container if you perform a batch mix.

Add ALSAN RS CATALYST POWDER to the amount of resin that can be used in the next 10 to 15 minutes. Add pre-measured ALSAN RS CATALYST POWDER to the resin component, stir for 2 to 3 minutes and apply to the substrate.

Refer to the *Catalyst Mixing Chart* for additional information on the product data sheet.

Apply a coat of ALSAN CIVIL P70 to a wet film thickness of **560 µm (22 mils)** using a roller or a flat squeegee.

The pot life of the mixture is 15 minutes at 23 °C (73 °F).



NOTE: The temperature of the concrete or steel substrate must be at least 3 °C above the dew point during application and during the entire curing process



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WATERPROOFING MEMBRANE
(details & upstands)

ALSAN CIVIL 773

- 4.A. When the **ALSAN CIVIL P70** primer is completely cured, apply the **ALSAN CIVIL 773** waterproofing membrane to the details and upstands.

Using a low-speed mechanical stirrer (200 to 400 rpm), thoroughly mix the entire contents of the resin container for 2 to 3 minutes before each use, and before pouring the resin into a second container if you perform a batch mix.

Add **ALSAN RS CATALYST POWDER** to the amount of resin that can be used in the next 10 to 15 minutes. Add pre-measured **ALSAN RS CATALYST POWDER** to the resin component, stir for 2 to 3 minutes and apply to the substrate.

Refer to the *Catalyst Mixing Chart* for additional information on the product data sheet.

Apply a coat of **ALSAN CIVIL 773** to a wet film thickness of **2 000 µm (80 mils)** using a roller or a flat squeegee. The surface coat must be smooth and even.

The pot life of the mixture is 18 minutes at 23 °C (73 °F).

OR

- 4.B. When the **ALSAN CIVIL P70** primer is completely cured, apply the **ALSAN CIVIL 773 SP** waterproofing membrane to the details and upstands.

Using a low-speed mechanical stirrer (200 to 400 rpm), independently mix the contents of Part A and that of Part B for 2 to 3 minutes.

Add pre-measured **ALSAN RS CATALYST POWDER** to the contents of Part A and stir for 2 to 3 minutes.

Refer to the *Catalyst Mixing Chart* for additional information on the product data sheet.

Install the multi-component spraying equipment at a volume ratio of 1:1 on Part A and Part B.

Spray apply a coat of **ALSAN CIVIL 773 SP** to a wet film thickness of **2 000 µm (80 mils)**. The surface layer must be smooth and even.

The pot life of the mixture is 12 minutes at 23 °C (73 °F).

TOPCOAT
(surface horizontale)

BITUMINOUS COATING

5. Once the installation of the waterproofing system is complete, proceed with the application of the bituminous concrete.

The topcoat must be applied within a maximum of 72 hours after installation of the waterproofing membrane.

The temperature of the bituminous concrete during installation must reach at least 140 °C (284 °F) at the point of contact with the membrane.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.



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