

Polyfin Duo® 5018 SK – Application instructions

Application instructions Polyfin Duo 5018 SK

General Information:

The long-term stability of a Polyfin Duo 5018 SK roof seal depends primarily on the quality of the stability of the layers underneath (insulation, vapor barrier, old structures, etc.). If the positioning stability is not optimal or suitable for transferring the wind loads that occur, even a highly stable bond with the Polyfin Duo 5018 SK cannot secure the roofing in position. It must also be ensured that all layers of the roof layer package located below the sealing are bonded downwards in a wind suction-proof manner (with regard to the expected wind loads).

Substrate requirements for self adhesive bonding of Polyfin Duo 5018 SK:

- The wind up lift resistance of the supporting deck is assumed.
- The additional layers of the roof layer package built on the supporting shell are according to the According to the respective manufacturer's instructions, it must be bonded to the substrate in an appropriate manner to sufficiently counteract the underlying wind suction loads.
- Surfaces must be rubbed down, smooth, free of gravel pockets and foreign bodies, and dry.
- In general, substrates must be free of loose components such as dust, cement slurry, etc. Contamination with other release agents such as formwork oils must also not be present.
- All surfaces to be glued to must be dry and free of oil and grease.
- Absorbent surfaces may need to be primed with an adhesion-promoting primer
- Joints in concrete substrates, with the exception of expansion joints, must be mortared and rubbed smooth.

Processing temperature, weather conditions and storage:

- For proper, reliable bonding, a temperature of at least +8°C must be maintained. This applies to all materials involved in the bonding process (Polyfin Duo® 5018 SK roofing membrane, but also the substrate to be bonded), as well as to the ambient temperature.
- If the roofing membrane is to be bonded at lower temperatures, appropriate protective measures must be taken to create the above-mentioned conditions. This can be achieved, for example, by storing the roofing membrane in a conditioned environment before processing and by enclosing the areas in which work is to be carried out (with heating if necessary).
- The unprocessed rolls must be protected from moisture.
- The unprocessed rolls must be protected from light. Prolonged exposure of unprocessed Polyfin Duo® 5018 SK rolls to light may impair the adhesion of the SK layer on the outer winding. Can be stored for 12 months from delivery.
- Higher outside temperatures can temporarily impair the removability of the protective film on the

underside. The process is reversible, i.e. the protective film can be removed more easily once the sheets have cooled down.

Substrate preparation, substrates suitable for bonding

Insulation materials:

Often the weakest point in a properly bonded system is NOT the bonding of the roof membrane to the insulation material. In most cases, the wind up lift resistance is limited by the internal tensile strength of the insulation material, or by the adhesion or bonding of any existing laminations to the rigid foam or mineral fibers of the respective insulation board.

When bonding Polyfin Duo® 5018 SK to insulating materials, the instructions and approvals of the respective insulating material manufacturer must therefore be observed in particular.

Insulation boards must be laid tightly butted and without height differences.

EPS - Expanded polystyrene

Polyfin Duo® 5018 SK membranes can be bonded directly and without additional primer to EPS insulation materials of DAA quality from a minimum compressive stress of 100 kPa at 10% compression (corresponds to "dm"). It is particularly important to ensure that the surface is free of dust and other loose particles. It may be necessary to sweep the surface in a suitable manner before applying Polyfin Duo® 5018 SK.

PIR / PU - Polyurethan bzw. Polyisocyanurat:

Alu foil faced: Bonding only possible after prior consultation with Polyfin application technology on a project-specific basis.

(Mineral) tissue faced: A primer must be applied before bonding. The primer must be completely dry before bonding the Polyfin Duo® 5018 SK membrane.

Mineral wool:

Rockwool Bondrock MV (mineral tissue faced) and Rockwool Megarock: A primer must be applied before bonding. The primer must be completely dry before bonding the Polyfin Duo® 5018 SK membrane.

Timber boarding, ply wood, other wooden derivatives:

OSB/3 and OSB/4: A primer must be applied before bonding. Before bonding the Polyfin Duo® 5018 SK membrane, the primer must be completely dry. An unbonded zone ≥ 5 cm and ≤ 10 cm wide must be created above the board joints ("expansion strip"), in which no bonding takes place between Polyfin Duo® 5018 SK and the formwork.

Timber boarding (e.g. tongue and groove boards):

Polyfin Duo® 5018 SK must not be bonded to board formwork.

Bituminous substrates (e.g. in case of roof refurbishments):

Elastomeric bitumen (SBS), oxidized bitumen (with chippings or fine sand finish): The substrate must be swept clean and any loose particles removed. Apply a primer before bonding. The primer must be completely dry before bonding the Polyfin Duo® 5018 SK membrane.

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Plastomeric bitumen (APP): Plastomer bitumen sheets are not suitable as a substrate.

Mineralic substrates, such as concrete:

Concrete substrates must be smooth, even, free of gravel pockets, ridges and loose particles such as superficial cement laitance. Loose components such as superficial cement laitance. It may be necessary to level the substrate beforehand. A primer must be applied before bonding. The primer must be fully dry before bonding the Polyfin Duo® 5018 SK membrane.

Notes on practical application:

Bonding to the substrate:

Opportunity a):

Unroll and align the sheet. Then roll the sheet back about halfway. Carefully cut the release film on the underside across the entire width and pull it off when rolling back the sheet in the direction of installation. Proceed in the same way with the other half of the sheet. Use a broom to press down the entire surface of the sheet. Finally, press the entire surface onto the substrate, e.g. with a lawn roller completely filled with water, max. 60 cm wide.

Opportunity b):

Roll out the sheet completely and align it. Pull the release film out to the side and press the sheet down

as described under a). Tip: It is best to work in pairs so that one person can secure the sheet against slipping when pulling out the release film from the side. Press down the sheet as described under a).

Seam joint overlapping and transversal joints:

The sheets must always be overlapped by at least 8 cm in the area of seam overlaps. Transversal joints must be welded over with Polyfin Duo® 3018 or Polyfin Duo® 3020 strips.

Seam joining and details:

Further information on seam joining techniques and detailing in general can be found in the "Polyfin installation instructions".

Connection to other roofing membranes and accessories from the Polyfin® product range:

Polyfin Duo® and Polyfin Duo® SK membranes can be welded to Polyfin® products using hot air. This applies, for example, to molded parts such as inner and outer corners, sleeves for the edging of

penetrations such as lightning protection connection lugs and attachment points, but also Polyfin laminated metal sheets and drainage elements with Polyfin 4020 v collars.

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