

alkus® solid plastic panels: application instructions

Nailing

As easy as it may be to knock nails into timber panels, a major disadvantage is always visible on the rear: the veneer cracks and starts to flake off, allowing moisture and release agents to penetrate the panel. The biodegradable release agent becomes contaminated by airborne particles, resulting in mildew, which will rot and destroy the veneer layers.

alkus® solid plastic panels can be nailed into place just like plywood, but without the veneer cracking and flaking off, thus eliminating the risk of mildew. The tensile strength has, of course, been confirmed by comparative tests carried out with plywood.

Recommendations for nailing alkus® solid plastic panels

As the alkus® solid plastic panels can be nailed in place just the same as plywood, there are some handy tips and tricks for the treatment of holes below. We recommend you to use a hammer to level out the raised rim around the edge of the hole after removing a nail. This ensures a smooth and flat surface, and neither water nor concrete laitance can escape from the hole. The penetration of water will not cause alkus® solid plastic panels to fail or rot.

Sawing

alkus® solid plastic panels can be sawn with common woodworking machines. If the work is carried out too slowly, there is a risk of lump formation. Therefore, always work swiftly.

Applying concrete release agents

- Effect of water-soluble release agents

Water-based release agent emulsions, in particular, have a tendency to allow the release agents to drain off (roll off), thus preventing the formation of a release film. When applying water-soluble release agents, the release film at the top edge of the formwork can be washed off if the formwork is filled with concrete via crane buckets. This results in concrete adhesion, as the release film no longer exists. To achieve optimum concrete surfaces, we recommend you to pre-treat the face of the formwork directly prior to setting.

This pre-treatment involves applying a very thin layer of the concrete release agent alkus® FT8. Experience has shown that this should be carried out before each application.

- Handling the release agent FT8

Since alkus® solid plastic panels absorb neither water nor formwork oil, it is not wise to oil them after stripping the formwork. Experience has shown that the panel formwork and the face of the formwork should be pre-treated prior to each cast. alkus therefore recommends the solvent-based concrete release agent FT8. The excessive application of solvent-based release agents will result in separating layers that are too thick and have the tendency to stick. The further application of release agents depends on the respective construction site conditions.

- Application quantity

Only apply a very thin layer of the release agent to ensure the solvent evaporates immediately. A very thin film remains on the surface. We therefore recommend the use of a special stainless steel nozzle, which produces a very fine spray mist for a longer period of time.

Consumption: approx. 1 ltr for 80 m².

- Formwork wax

Liquid formwork wax is recommended for any type of formwork. It is either sprayed evenly onto the parts of the formwork which are not in contact with the concrete or applied with a brush or sponge. When working with elements, i.e. for wall and slab formwork, we also recommend you to spray the element stack all the way around. The face of the formwork should be treated with the recommended

FT8 as usual, as residual wax on the concrete can impair finishings.
Caution: the concrete release agent FT8 should not be stored in galvanised containers.

Cleaning alkus® solid plastic panels after stripping the formwork

Basically, carbide tools (e.g. scrapers with tungsten carbide blades, etc.) should not be used to clean the panels. Use a rotary cleaner or, if necessary, a concrete scraper to dislodge any stubborn concrete residue after cleaning the formwork.

a) Manual cleaning

Trowels, spatulas or hard pieces of wood are suitable - when held flat - to remove concrete residue the next day around the level marking the top edge of the concrete. Any remaining concrete can then be removed by hand using protective leather work gloves.

b) Cleaning with a rotary cleaner

Only use a rotary cleaner fitted with a plastic pad in order not to damage the face of the formwork.

c) Cleaning with a high-pressure washer

We recommend a high-pressure washer with up to 1000 bar operating pressure as the most modern and efficient way to clean the elements. Water consumption is extremely low when using this method of cleaning. After concreting, this device can also be used to wash down the formwork.

d) Industrial cleaning

When using a cleaning machine, ensure that appropriate plastic brushes are fitted for cleaning the face of the formwork.

Recommendations for installing the panels

Screw attachment

Due to temperature exposure, the screw heads may be sheared off by the aluminium layer in alkus® solid plastic panels. Therefore, the borehole should be drilled roughly 1 mm larger than the diameter of the actual screw.

Due to the long service life of alkus® solid plastic panels, we recommend you to rivet them (stainless steel blind rivets with countersunk head D=5x20 mm for panel thicknesses of 6-10 mm, D=5x25 mm for panel thicknesses of 11,5-17 mm and D=5x33 mm for panel thicknesses of 18-23 mm). Furthermore, we recommend you to keep the gap between the edge and the alkus® solid plastic panel as small as possible. Any gaps greater than 2 mm between the leading edge of the elements and the alkus® solid plastic panel can be closed with transparent silicone.