



## weberfloor 4670N Marine Base

- For most types of substrates
- For slope building and thicker layers
- Rapid drying and fast setting
- High surface strength

### About this product

weberfloor 4670 Marine Base is a rapid drying mortar for use on steel-, galvanized steel- and aluminum decks as well as existing concrete and stone and ceramics. It has a somewhat coarser structure than self-levelling compounds, and needs to be primed and fine smoothed prior to laying floor coverings. weberfloor 4670 is supplied as pre-mixed dry powder, water is added on site of construction. The material is mixed and applied by hand, quickly attains a high surface strength and is walkable after 1-3 hours. Final covering after 1 day. Note that the curing time depends on the substrate temperature and the ambient air temperature of the work area as well as the relative humidity. weberfloor 4670 meets all fire technical requirements as a subfloor for floor coverings in passenger/merchant vessels and offshore installations according to IMO Res. A.687 (17). For special applications not covered in this product datasheet, please contact Weber for further advice and guidance. Also refer to applicable national regulations.

### Area of use

weberfloor 4670 is designed for use in marine- and offshore installations inside in cabin areas, wet areas and other high traffic areas, where there are demands for rapid surface strength for rapid laying of floor coverings. weberfloor 4670 satisfies the requirements of the authorities and classification bodies for screed mortars. weberfloor 4670 can be used as a bonded screed on steel-, galvanized steel- or aluminum decks. It can also be applied on existing concrete/cement based or stone and ceramics substrates for ship repair purposes. weberfloor 4670 is hand-applied at thicknesses between 20 and 150 mm, and its soil consistency makes it easy to build slopes, form smaller ramps etc. weberfloor 4670 is not suitable as a final subfloor for floor finishes and should be covered with weberfloor 4660/weberfloor 4675/weberfloor 4690 to achieve a surface smoothness ready for floor covering, but it is not an absolute requirement for stone and ceramics. The combination of weberfloor 4665 and weberfloor 4660/weberfloor 4675/weberfloor 4690 is suitable as a finished subfloor for most floor coverings, such as PVC, vinyl, linoleum, stone and ceramics, carpets etc.

weberfloor 4670 is designed for use as a subfloor for most coverings and should not be used without a final floor finish. The floor covering should be applied as soon as the conditions allow. The product should not be used in a humid environment over 95% RH. Any special requirements for the floor covering concerned should be observed, comply with the requirements from the floor covering manufacturer. When the screed mortar has hardened and been smoothed, it will

### Product specification

Material consumption	1,8 kg/mm/m <sup>2</sup>
Minimum layer thickness	10 mm
Maximum layer thickness	150 mm
Recommended water content	Approx. 1,6 liter per 20 kg bag (8%)
Application temperature	Minimum 10°C
Pot life (Operating time)	Approx. 30-40 minutes (after adding water)
Curing time for pedestrian traffic	1-3 hours
Compressive strength	C20 EN 13813
Compressive strength 28 days	Mean value 35 N/mm <sup>2</sup> (MPa) EN 13892-2
Flexural strength average class	F4 EN 13813
Flexural strength 28 days	Mean value 6,5 N/mm <sup>2</sup> (MPa) EN 13892-2
Shrinkage 28 days	<1,0 mm/m EN 13454-2
Fire class	A2fl-s1 A1301 Primary deck covering, Marine EN 13501-1, IMO FTPC Part 6 and IMO FTPC Annex 2, section 2.2
Wear resistance to rolling wheel of screed material with floor coverings (RWFC)	RWFC 250 (thickness 2-30 mm) EN 13892-7
pH	11
Storage conditions	When stored in unopened and intact packaging, under dry conditions, shelf-life is min. 12 months from date of manufacture. Incorrect storage could have an adverse impact on the product properties. Older material should be tested, using the stipulated amount of added water to the mix, to ensure that the product properties are intact and the material cures within 1-2 hours after application. Longer setting times indicate that the product properties have been disrupted and the material should not be used. Avoid adding more water than recommended.
Package	20 kg bags on plastic wrapped pallets

provide a finished sub-floor for most types of floor covering. If weberfloor 4670 is not covered within the stipulated drying time, or used as a working platform or transport area during the building process, sufficient cleaning is important to achieve a suitable substrate for the floor covering.

### Substrate

Steel, galvanized steel, aluminum, concrete/cement-based, stone and ceramics and plywood boards. The substrate shall be clean and free from dust, cement rich skin and laitance, grease and oil residues, weak surface layers and other impurities that might prevent adhesion. Laitance of old coatings and contaminants should be removed mechanically, e.g. by shot blasting or flame cleaning. The surface tensile strength of the substrate should be above 10 N/mm<sup>2</sup> (MPa). The substrate temperature should be above +10°C.

## To know before applying

Tools and machinery should be cleaned for fresh material using water. Hardened material should be removed mechanically. To check that the screed has been installed according to the manufacturer's instructions, it is possible to measure the surface tensile strength. After 28 days curing the value should be  $> 1,0 \text{ N/mm}^2$  (MPa). Contact Weber for more details. Dehumidifiers should not be used for the first two days after application. Gas heating should not be used prior to priming and application. Please observe that slow drying out due to low temperatures could affect the performance of the mortar.

## Pretreatment

The substrate should be mechanically prepared to remove impurities that might prevent adhesion and then vacuum cleaned. The substrate should be primed properly. Floor drains etc. should be protected with lids and separated with stop ends. Steel decks must be primed with weberfloor 4716 Primer diluted 5:1 with 5 parts of primer and 1 part of clean water, applied to the substrate using rubber squeegee, roller, brush or primer pump. On existing concrete/cement-based substrates for ship repair purposes weberfloor 4670 is applied 'wet in wet' before the primer has fully dried. Galvanized steel- and aluminum decks must be primed with weberfloor 4760N/4762N Epoxy Primer, applied to the substrate using a rubber squeegee and roller. After application and whilst the primer is still fresh, it must be sand-scattered completely with fire-dried quartz sand with grain size 1-2 mm. After the primer has cured all residual sand should be vacuum cleaned and the sanded surface should be primed with weberfloor 4716 diluted 1:3 with 1 part of primer and 3 parts of clean water. If another epoxy primer is being used, check for compatibility with weberfloor 4670. For details on the primers see separate product datasheets for weberfloor 4716 and weberfloor 4760N/4762N. The function of the primers is to improve adhesion to the substrate, to prevent air bubbles and de-watering of the screed before hardening.

The temperature in the substrate should be above  $+10^\circ\text{C}$  for the primer to create a film. For ideal working conditions the ambient air temperature of the work area should be  $+10\text{-}25^\circ\text{C}$ . Light ventilation in the work area is necessary, but windows and openings should be closed sufficiently to avoid draughts during and after application. The dry-mix material should be kept in a heated area before use. Strongly cooled material conveys a risk that certain additives will not be able to dissolve during mixture.

The material can be used in higher ambient air temperatures in the work area up to approx.  $+40^\circ\text{C}$ . In such conditions the workability of the compound and the flow properties should be observed as too high temperature strongly affects the pot life (open time) of the product, e.g. lead to flow properties changing and premature setting and hardening of the compound. To compensate for too high temperature of the work area and in the substrate it is recommended to cool down the added water with ice and also to restrain from using the material in direct exposure to sunlight. Keep the dry-mix material stored in a ventilated area not exposed for direct sunlight.

## Mixing

weberfloor 4670 should be mixed by adding 1,6 liters of clean water per 20 kg bag (8% of the dry weight of the material). While mixing, ensure that the material is correctly mixed, and that the mixture is homogenous and free from separation. It is important to add the stipulated amount of water as excess water will reduce surface strength, increase shrinkage and encourage segregation. Conversely reduced water content increases viscosity. The temperature of the mix should ideally be between  $+10^\circ\text{C}$  and  $30^\circ\text{C}$ . Once mixed, the compound remains workable for approx. 30-40 minutes under ideal working conditions but no further water should be added. Under too high temperature, the compound remains workable considerably shorter.

## MIXING BY HAND

Mixing is done in a larger mixing drum or mixer (automatic batch mixer, paddle mixer, tombola) with room for 3-4 bags of dry material per batch, giving a total volume of 60-80 liters. First pour parts of the water into the mixing drum/mixer, then add weberfloor 4670. When emptying the bags into the mixing drum/mixer, keep it in an underpressure with a vacuum cleaner to reduce dust. Pour in the rest of the mixing water. The material and water should be mixed using a powerful mixer or drill fitted with a paddle or a beater for minimum 2 minutes, until a homogenous, lump-free soil consistency is achieved.

## Work instructions

Spread the mixed mortar over the substrate and level off with a straightedge on battens or steel pipes of the desired thickness. Start applying the mortar in the short end of the room. The surface may be smoothed by float or steel trowel after compression. In wet rooms and other rooms which require the floor to slope towards a drain, a batten or steel pipe must be placed against the wall. The mortar is then dragged towards the drain or other desired low point. Ensure that floor drains, holes etc. are properly sealed off prior to application to avoid clogged drains and pipes. weberfloor 4670 should be applied within 24 hours after the primer has cured to ensure proper adhesion.

## HAND APPLICATION

For application pour the mixed mortar into smaller mixing buckets. Start in the farther end of the work area and distribute the mixed mortar in parallel with an end wall, finishing by an exit/ opening, and level off using a straightedge on battens or steel pipes. Compress and smoothen the mortar lightly with a float or steel trowel. If possible, use two mixing buckets to ensure there is always fresh screed available during the application. The half-cured mortar can easily be formed and scraped, therefore do not wait too long with necessary fine adjustments. Any fine adjustment after the mortar has cured requires advanced grinding equipment. If the surface should be over laid with weberfloor 4660, weberfloor 4675 or weberfloor 4690 within 2-3 days the surface should be primed with weberfloor 4716 twice, provided that the screed has dried out sufficiently enough for the primer to penetrate down and form a film. First coat diluted 1:5 with 1 part of primer and 5 parts of clean water, and second coat diluted 1:3 with 1 part of primer and 3 parts of clean water.

## After-treatment

Due to its coarser surface structure the mortar should be fine smoothed with weberfloor 4660, weberfloor 4675 or weberfloor 4690 before final floor finish, such as PVC, vinyl, linoleum, carpets etc., but it is not an absolute requirement for stone and ceramics. weberfloor 4670 allows foot traffic after approx. 1-3 hours. Before laying the floor covering it should always be checked that the structure has dried out sufficiently for the chosen type of floor covering. weberfloor 4670 can be over laid with a floor covering after approx. 1 day provided the floor covering will withstand minimum 85% RH, comply with the requirements from the floor covering manufacturer. The stated drying time assumes good drying out conditions of  $+20^\circ\text{C}$ , 50% RH and an exchange of air. The surface can be over laid with stone and ceramics in dry conditions after approx. 4 hours.

The mortar should not be used without final floor finish. Cover within 7 days. If not possible to cover with final floor finish within 7 days, cover with temporary covering such as plastic foil, waxed paper, geotextile with plastic backing to prevent the screed from drying out too much increasing the risk for shrinkage cracks. Ensure that all overlaps in the covering and floor-to-wall joints are properly sealed off and tight. weberfloor 4670 is self-drying, and dries out and cures from within, which means it quickly attains a surface strength and that surplus water is chemically bonded over time. If the surface is

not covered in time, moisture that the screed needs internally to cure properly evaporates into the air. The surface may be primed with weberfloor 4716 diluted 1:5 with 1 part of primer and 5 parts of clean water to prevent the screed from too rapid drying out.

#### **Disclaimer**

As there are different conditions at every opportunity, Weber can not be held responsible for anything other than the information provided under the heading "Product Specification". Examples of information and circumstances, which are outside Saint-Gobain (whether specifically stated or not) include storage, construction, processing, interoperability with other products, workmanship and local conditions.