



weberfloor 4665N Marine Fire

- Pumpable
- Rapid drying and fast setting
- High surface strength
- Low shrinkage

About this product

weberfloor 4665N Marine Fire is a cement-based, pumpable self-levelling material for installations requiring fire-insulating constructions with non-combustible materials according to IMO Res. A.754 (18), in layer thicknesses from 25 to 50 mm. The material is supplied as pre-mixed dry powder. Water is added on site of construction. The screed can be hand-applied or pumped in towards place of application using a Weber mixer pump, and requires only light mechanical handling with a trowel or spatula to achieve an adequate surface evenness. The material quickly attains a high surface strength and is walkable after 6-12 hours. Final covering can be laid after drying 10 mm per day, maximum 7 days. 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 4665N meets all fire technical requirements as an underlayment for floor covering onboard passenger/merchant vessels and offshore installations. For special applications not covered in this product datasheet, please contact Weber for further advice and guidance. Also refer to existing national regulations.

Area of use

weberfloor 4665N is designed for use inside in marine and offshore installations in light traffic areas requiring fire-insulating constructions with non-combustible materials according to IMO Res. A.754 (18). weberfloor 4665N satisfies the requirements of the authorities and classification societies/bodies for an A-60 deck covering. weberfloor 4665N should be used as a floating screed on top of non-combustible insulation in fire-insulating floors at layer thicknesses between min. 25 and 50 mm.

weberfloor 4665N is not suitable as a final subfloor for floor finishes and should be covered with weberfloor 4660N to achieve a surface smoothness ready for floor covering, but it is not an absolute requirement for stone and ceramics. The combination of weberfloor 4665N/weberfloor 4660N is suitable as a finished subfloor for most floor coverings, such as PVC, vinyl, linoleum, stone and ceramics, carpets etc. Or alternatively weberfloor 4665N can be grinded/sanded to achieve an adequate surface smoothness ready for most coverings.

weberfloor 4665N is designed for use as a subfloor for most coverings in fire-insulating constructions 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

Product specification

Material consumption	1,7 kg/mm/m²
Minimum layer thickness	25 mm
Maximum layer thickness	50 mm
Recommended water content	3,4 liters per 20 kg bag (17%)
Application temperature	Minimum 10°C
Pot life (Operating time)	Approx. 15-20 minutes (after adding water)
Curing time for pedestrian traffic	6-12 hours
Compressive strength class	C20 EN 13813
Compressive strength 28 days	Mean value 26,5 N/mm² (MPa) EN 13892-2
Flexural strength class	F6 EN 13813
Flexural strength 28 days	Mean value 7 N/mm² (MPa) EN 13892-2
Shrinkage 28 days	<0,5 mm/m EN 13454-2
Fire class	A2fl-s1, IMO FTPC Part 3
Flow rate according to Weber standard	205-220 mm with Weber standard method 99:03 (flow ring 68x35 mm)
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 1000 kg big bags Bulk (loose material)

covering manufacturer. When the smoothed floor has hardened, and been rubbed down where necessary, it will provide a finished subfloor for most types of floor coverings. If weberfloor 4665N 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

The substrate should be fire-retardant mineral wool insulation. Non-combustible fibre textile should be applied on top of the insulation as a dividing layer to separate the screed from the underlying insulation. See current certificates for approved types of insulation and fibre textile.

Substrate type

- Steel

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 material.

Pretreatment

Lay the insulation boards with staggered joints. Lay the fibre textile on top over the insulation boards with approx. 200 mm overlap. All the joints/overlaps in the fibre textile and to the adjoining structures must be sealed/taped carefully. Steel reinforcement net, \varnothing 5 mm and grid size 150 mm, should be attached and netting laid with one grid overlap carefully fastened.

The temperature in the substrate should be above $+10^\circ\text{C}$. For ideal working conditions the ambient air temperature of the work area should be $+10$ - 25°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.

Slow drying out due to low temperature due to high humidity should be observed as that may result in pinholes in the leveling layer.

Mixing

weberfloor 4665N should be mixed by adding 3,4 liters of clean water per 20 kg bag (17% of the dry weight of the material). While mixing, the water content should be checked continuously by the flow ring test, see flow rate according to Weber standard in table above. Also 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°C . Once mixed, the compound remains workable for approx. 15-20 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 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, then add weberfloor 4665. When emptying the bags into the mixing drum, 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 and low viscosity consistency is achieved.

MIXING BY PUMP

weberfloor 4665N should ideally be mixed and applied using a

Weber approved mixing pump. The water content is set to 17% added water to the mix.

NB! It is important that the pump is set to the stipulated water content and do not add more water than necessary to achieve a good result.

Work instructions

The mixed product should be distributed over the surface using a steel trowel or toothed spatula.

HAND APPLICATION

For application pour the mixed product into smaller mixing buckets. Start in the farther end of the work area and distribute the mixed screed in parallel with an end wall, finishing by an exit/opening, using a steel trowel or toothed spatula to assist the self-levelling process and achieve a smooth surface. If possible, use two mixing buckets to ensure there is always fresh screed available during the application. The half-cured screed can easily be formed and scraped, therefore do not wait too long with necessary fine adjustments. Any fine adjustment after the screed has cured requires advanced grinding equipment. If the surface should be overlaid with weberfloor 4665N 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.

MACHINE APPLICATION

The screed should be pumped onto the prepared substrate in lengths. Every new length is applied as soon as possible in order for the screed to flow together to create a uniform layer. During application use a steel trowel or toothed spatula to assist the self-levelling process and achieve a smooth surface, and to avoid foam and hose marks. The maximum width of the pumpable area varies from approx. 6-8 meters depending on the capacity of the pump and the layer thickness. Wider areas should be temporarily divided with separate stop-ends. Pumping is carried out in sections as a new section is pumped as quickly as possible slightly on top of the adjacent section. If an extremely levelled floor is required, it is important to keep the Pumpable width as small as possible. weberfloor 4965 is used as temporary stop-ends. Always line up the stop end. Ensure that floor drains, holes etc. are properly sealed off prior to application to avoid clogged drains and pipes. The half-cured screed can easily be formed and scraped, therefore do not wait too long with necessary fine adjustments. Any fine adjustment after the screed has cured requires advanced grinding equipment. The ideal length of the pump hose should be between 40 and 100 meters depending on the type of pump.

If the surface should be overlaid with weberfloor 4665N 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

weberfloor 4665N allows foot traffic after approx. 6-12 hours, but recommended to wait approx. 1 day before allowing foot traffic to reduce the risk for cracks in the surface. 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 4665N can be overlaid with a floorcovering after approx. 10 mm per 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 overlaid with stone and

ceramics in dry areas after approx. 4 hours.

The underlayment 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 4665N is self-drying, and dries out and cures from within. 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.

Safety regulation

See current Material Safety Data Sheet.

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.