



## weberfloor 4675N Marine Flow Rapid

- Smooth surface
- Rapid drying and fast setting
- High surface strength
- Subfloor for resin coatings
- For light industry

### About this product

weberfloor 4675N Marine Flow Rapid is a rapid drying, cement-based, pumpable self-levelling material with high wearing resistance for use as a subfloor for epoxy-, polyurethane- and acrylic based resins or industrial stone and ceramics. weberfloor 4675 can be applied in layer thicknesses from 2 to 30 mm, for internal use. 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, spatula or spiked roller to achieve an adequate surface evenness for final floor finish.

The material quickly attains a high surface strength already after 1-3 days. The finished surface varies in surface structure and colour depending on current raw materials, mixing- and application conditions. weberfloor 4675N is especially suitable when there are demands for short refurbishment times as well as large levelling needs. weberfloor 4675N is walkable after only 2-4 hours depending on the temperature. weberfloor 4675 allows careful foot traffic after 1 day and full traffic loads after 7 days under normal temperature conditions. Final floor finish after 1-3 days (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 4675N meets all fire technical requirements as an underlayment for floor covering onboard passenger/merchant vessels and offshore installations according to IMO Res. A.687 (16). 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 4675N Marine Flow Rapid is designed for use in marine and offshore installations in light industrial traffic areas as an underlayment for epoxy-, polyurethane- and acrylic based resin coatings inside. weberfloor 4675N satisfies the requirements of the authorities and classification bodies for primary deck coverings. weberfloor 4675N can be used as a bonded screed and as an underlayment screed on both new and old concrete/cement-based substrates and stone and ceramics for newbuild and ship repair purposes. weberfloor 4675N is designed for application at thicknesses between 2 and 30 mm if hand applied or between 4 and 30 mm if pumped.

weberfloor 4675N is designed as a subfloor for most resin coatings. The floor finish should be applied as soon as the

### Product specification

Material consumption	1,6 kg/mm/m <sup>2</sup>
Recommended layer thickness	2-30 mm
Minimum layer thickness	2 mm
Maximum layer thickness	30 mm
Recommended water content	4,0-4,2 liters per 20 kg bag (20-21%)
Application temperature	Minimum 10°C
Pot life (Operating time)	Approx. 15-20 minutes (after adding water)
Curing time for pedestrian traffic	12-14 hours
Curing time for light traffic load	1 day
Curing time for full traffic load	7 days
Compressive strength class	C25 EN 13813
Compressive strength 28 days	Mean value 32 N/mm <sup>2</sup> (MPa) EN 13892-2
Flexural strength class	F7 EN 13813
Flexural strength 28 days	Mean value 9 N/mm <sup>2</sup> (MPa) EN 13892-2
Surface tensile strength	> 1,5 N/mm <sup>2</sup> (MPa)
Shrinkage 28 days	< 0,5 mm/m EN 13454-2
Fire class	A2fl-sI Fire class: A2fl-sI A1301 Primary deck covering, Marine EN 13501-1, IMO FTPC Part 6 and IMO FTPC Annex 2, section 2.2
Wear resistance	Steel wheel, class: Strength properties after storage in regulated conditions +23°C and 50% RH with 21% added water. Wear resistance according to BCA class AR2 EN 13892-4
Flow rate according to Weber standard	240-255 mm with Weber standard method 99:03 (flow ring 68x35 mm) Flow rate according to SS 923519 155-160 mm (flow ring 50x22 mm)
The pH of the cured material	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	25 kg bag 1000 kg bigbag Bulk (loose material)

conditions apply. The product should not be used in a humid environment over 95% RH. Any special requirements for the resin finish concerned should be observed, comply with the requirements from the resin manufacturer. When the

smoothed floor has hardened, and been rubbed down where necessary, it will provide a finished subfloor for most resin coatings. The layer thickness on the resin coating should normally be above 3 mm, 5 mm if the floor should withstand truck loads. If weberfloor 4675N should not be over laid a floor finish, then to reduce the material's absorption of dust and contaminants as well as to facilitate cleaning a suitable surface treatment could be applied. If weberfloor 4675N is not covered or used as a working platform or transport area during the building process, sufficient cleaning is important to achieve a suitable substrate for the resin finish.

#### Substrate

Concrete/cement-based and stone and ceramics. The substrate must be hard, 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 1.5 N/mm<sup>2</sup> (MPa). The substrate temperature should be above +10°C. Shrinkage in newly cast concrete should have stopped, as cracking could otherwise occur.

#### 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 N/mm<sup>2</sup> (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

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. Concrete/cement-based substrates must be primed with weberfloor 4716 Primer twice. The first coat diluted 1:5 with 1 part of primer and 5 parts of clean water, applied to the substrate using rubber squeegee, roller, brush or primer pump.

The second coat diluted 1:3 with 1 part of primer and 3 parts of clean water, applied as soon as the first coat has dried. Stone and ceramics must be primed with weberfloor 4716 diluted 1:1 with 1 part of primer and 1 part of clean water, and whilst the primer is still fresh, it must be scattered completely with powder which is thoroughly brushed into the substrate. For details on the primer see separate product datasheet for weberfloor 4716. The function of the primer is to improve adhesion to the substrate, to prevent air bubbles and dewatering of the screed before hardening.

The temperature in the substrate should be above +10 °C for the primer to create a film. 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 °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 and/or poor film formation due to high humidity should be observed as that may result in pinholes in the leveling layer.

#### Mixing

weberfloor 4675N should be mixed by adding 4,0-4,2 liters of clean water per 20 kg bag (20-21% 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 °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 4675. 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 4675N should ideally be mixed and applied using a Weber approved mixing pump. The water content is set to 20-21% 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, toothed spatula or spiked roller. weberfloor 4675N should be applied within 24 hours after the primer has cured to ensure proper adhesion.

#### 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, toothed spatula or spike roller 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.

#### 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, toothed spatula or spiked roller 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.

#### **After-treatment**

weberfloor 4675N is walkable after approx. 2-4 hours. weberfloor 4675 allows careful traffic load after approx. 1 day and full traffic load after 7 days. Before laying the resin coating it should always be checked that the structure has dried out sufficiently for the chosen type of resin finish. weberfloor 4675N can be over laid with a floor finish approx. 1-3 days (10 mm per day) after application provided the floor finish will

withstand minimum 85% RH, comply with the requirements from the resin manufacturer. The stated drying time assumes good drying out conditions of +20 °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. Avoid exposing the floor for draughts and direct sunlight during application and 1-3 days after.

#### **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.