

weber.floor 4640

Outdoor RepFlow

Flow-grade concrete repair mortar R4 and levelling compound for thicknesses 10 - 80 mm (CT-C50-F7)

Fields of application

weber.floor 4640 is a combination product for renovation works of concrete floors. On one hand it can be used as reprofiling mortar or concrete replacement mortar and on the other hand as levelling compound in areas like courtyards, underground parking lots, warehouses production premises etc.

For floor surfaces which are subject to damp, frost and de-icing salts as well as high mechanical loads.

Dedicated for use as top wear layer on floors in warehouses and production halls with medium loads.

A subsequent covering with **weber** reactive-resin based coatings (for ex. weber.floor 4740 and 4741) or with the cement-based levelling compound for industrial floors weber.floor 4610 (4 – 15 mm) is possible.

For use indoors and outdoors.

Description

weber.floor 4640 is a ready-mixed dry and polymer-modified floor repair mortar of class R4 according to EN 1504-3 ("Products and systems for protection and repair of concrete structures/Static and non-static relevant repair works") and a floor levelling compound according to EN 13813 ("Screeds and screed mortars") with a max. grain size 2.0 mm.

Main features

- **CE marking: CT – C50 – F7**
- **repair mortar according to EN 1504-3 (class R4)**
- **floor levelling compound according to EN 13813**
- high flow performance
- very quick and economical application with **weber.floor MixMobil** (mixing and pumping)
- for use indoors and outdoors

- repair mortar (EN 1504-3 R4) and floor levelling compound in one on concrete surfaces
- high resistance to frost and de-icing salts
- convenient as top wear layer for direct use
- fiber-reinforced
- very high mechanical strengths
- open to water vapour

Technical values

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| Water demand (levelling compound): | max. 14% |
| Water demand (concrete replacement mortar): | approx. 14% - 15% |
| Compressive strength (28 days): | > 50 N/mm ² |
| Flexural strength (28 days): | > 7 N/mm ² |
| CDF test (resistance against freeze-thaw cycles/thawing agents): | < 10 g/m ² |
| Resistance to abrasion: | AR1(EN 13892-4/BCA rolling wheel test) |
| Resistance to fire: | class A 2 fl s1 |
| Pot life: | approx. 20 minutes at +20°C |
| Application temperature (air): | > +8°C - < +25°C |
| Application temperature (substrate): | > +8°C - < +25°C |
| Layer thickness: | 10 - 80 mm |
| Consistency (slump /flow rate) as levelling compound: | 150 - 200 mm (with flow ring: Ø 68 mm/height 35 mm) |
| Consistency (slump /flow rate) as concrete replacement mortar: | 150 - 180 mm (with flow ring: Ø 68 mm/height 35 mm) |
| Open to foot traffic: | approx. 24 hours at +20°C |
| Open to light load: | approx. 2 days at +20°C |
| Open to full load: | approx. 7 days at +20°C |
| Compressive strength (28 days): | > 50 N/mm ² (class R4) |
| Flexural strength (28 days): | > 7 N/mm ² |
| CE marking (levelling compound): | CT – C50 – F7.– AR1.0 |
| CE marking (concrete replacement mortar): | R4 (repair mortar according to EN 1504-3) |

Quality control

weber.floor 4640 is subject to a regular internal and external quality control.

General notes

- Comply with the national standards and/or guidelines relating to levelling works of floors. If not issued and if necessary, request technical advice.
 - In case of slopes (max. 1.5%) the flow performance can vary at some extent by reducing the water dosage.
 - High temperatures shorten, lower temperatures extend the pot life.
 - The hardened surface can vary in colour and appearance depending on raw material, job site conditions and the “handwriting” of the applicator.
 - In case of doubt regarding application, substrate or special structural features, request technical advice.
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Special notes

- Store material warm and dry before application.
 - Protect the freshly applied surfaces from rain during application and till to hardening.
 - During application and for 1 week afterwards the ambient air and floor temperatures should not fall below +8°C.
 - Low temperatures clearly extend the aftercare time and delay the setting process.
 - Protect the product from freeze during setting process.
 - Do not add any foreign substances during mixing, pumping and application.
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Substrates

- Only concrete is allowed as substrate.
- Refer to the specific **weber.floor** system recommendation “Concrete replacement on horizontal surfaces - Exterior and interior concrete surfaces, like underground car parks, storage halls, production areas”. For full information request technical advice.

Substrate preparation

- The substrate must be solid, load-bearing, dry and free of all adhesion-impairing substances.
- The substrate must always be prepared by appropriate mechanical means, for ex. grinding or shot-peening etc., in order to reach a pull-off strength $\geq 1.0 \text{ N/mm}^2$ in case of use as levelling compound and $\geq 1.5 \text{ N/mm}^2$ in case of use as repair mortar. The biggest grain size of the concrete substrate must be exposed.
- Reinforcing steel bars of concrete must be protected from corrosion with 2 coats of weber.rep KB duo.
- Apply the acrylic bonding primer weber.floor 4716 diluted with water in a ratio of 1 : 3 in at least one operation. In case of highly porous substrates repeat the operation. Wait until the primer becomes transparent and dry (at the latest 2 days) prior to application of weber.floor 4640.
- The substrate preparation must be adapted to the specific job site conditions.

Working instructions

Mixing

- Mechanical application: use mixing pumps approved by **Weber** (for ex. m-tec Duomix 2000 or MixMobil).
- For optimal application the whole length of hoses should be at least 40 meters.
- Before pouring the hoses should be pre-lubricated with a slurry of Portland cement or limestone flour and water prior to the pumping of the first mixture. Afterwards this mix is disposed of in a container as waste. Do not use it for the levelling compound.
- A steady consistency is a pre-requisite for the final properties of the levelling compound. Monitor the consistency regularly via slump test after mixing of every 5 tons of material. Take mixed material in the 1.3 liter tin, pour it into the flow ring and measure the slump on the flow table. The mortar must not show any bleeding. For optimal consistency a static post-mixer is necessary.
- Manual application: mix with max. 5 liters of water per 25 kg bag according to specific use for 1 - 2 minutes until lump-free, using a slow-speed electric drill and an appropriate stirrer (e.g weber.sys Rührpaddel no. 8). Observe a maturing time of approx. 3 minutes and mix again shortly.
- Excessive water content reduces the mechanical strengths, and increases the risk of cracks and shrinkage.

Application

- Mechanical application: the maximal surface of working lanes or sections must be determined in accordance with the processing and job site conditions, in order to ensure the full workability of the product (mixing, levelling and smoothing) within its pot life. If necessary, use the self-bonding foam strip weber.floor 4965 in order to limit working sections and to form bays and stop ends.
- Pumping is carried out in sections so that a new lane or section is pumped as quickly as possible and to maintain a wet edge. The material is applied along the previous section in the intended layer thickness, so that it can flow together.
- The material is pumped onto the floor and evenly distributed by swinging the casting hose back and forth in order to obtain a homogeneous layer.
- Once the right height is reached, the cast surface is immediately beaten through, using the wobbling bar weber Schwabbelstange; first lengthwise and strongly, then crosswise and somewhat smoother. Such wavelike movements bring a good levelling and aerating effect.
- Manual application: pour and distribute the material in the intended layer thickness with a serrated rake (notched blade scraper), for ex. weber ABS Schwedenraker in 60 cm width (for larger surfaces) and in 30 cm width (for angles and small surfaces). This tool will assist the self-levelling process and improves the de-aeration of the layer. Afterwards smooth with a wobbling bar of smaller size for levelling out minor marks (if any). A flat trowel can also be used in case of small areas and/or corners with difficult access.
- Clean mixing equipment and tools with water (fresh product). Hardened material must be removed mechanically.

Aftercare

- Protect freshly installed surfaces from draughts, and the direct effects of sunlight and heat.
- An aftercare like for freshly cast concrete is mandatory in the exterior areas, with for ex. an appropriate curing compound or a plastic foil which might leave some marks on the fresh product.
- Floors properly installed floors with weber.floor 4640 reach a pull-off strength $> 1.5 \text{ N/mm}^2$. In case of deposit of dirt on the surface, carry out a slight grinding or shot-peening before applying a coating.
- If a **weber.floor** reactive resin-based coating (weber.floor 4740 or 4741) will be applied, respect a waiting time of at least 7 days. It is mandatory to prepare the surface of weber.floor 4640 by slight shot-peening or grinding. The residual moisture content of the substrate must be $< 4\% \text{ CM-\%}$ (by weight) For measurement of residual moisture content use a CM device (carbide hygrometer) as a rule. The resin coat thickness must be $\geq 2 \text{ mm}$.
- If a **weber.floor** cement-based coating (weber.floor 4610 Industry Top) will be applied, respect a waiting time of 10 days. Prepare the surface of weber.floor 4640 by slight grinding. Apply the bonding primer weber.floor 4716 diluted with water in a ratio of 1 : 3 in at least one operation; it is evenly distributed and applied with a soft broom by brushing in intensively.

Practical information

Water demand:

as concrete replacement mortar: max. 3.5 liters/25 kg

as levelling compound: 3.5 - 3.75 liters/25 kg

Tools:

Mixing pump (for ex. m-tec Duomix 2000 or MixMobil) or electric drill + stirrer weber.sys Rührpaddel no. 8, slump test tools (tin, ring and table), wobbling bar weber Schwabbelstange serrated rake (notched blade scraper) weber ABS Schwedenraker in 60 cm width (for larger surfaces) and in 30 cm width (for angles and small surfaces)

Storage:

The product can be stored up to 12 months in its original unopened packaging, if kept dry, cool and frost-free.

Consumption / yield

per mm layer thickness: approx. 2.0 kg/m²

Packagings

| Type | Sales unit | Number / euro-pallet |
|----------------|------------|----------------------|
| Plastified bag | 25 kg | 42 bags |
| MixMobil | | |

The information in this technical data sheet is based on our current knowledge and experience at the time of printing. However, they do not guarantee in the legal sense.