

weber.plan 813-20

Floor levelling compound for large-size tiles

Premium smoothing mortar as underlay 1 - 20 mm for demanding floor coverings

Fields of application

As self-levelling and quick-setting floor compound for levelling dimensionally stable floor substrates.

It is mainly used as bonded system by manual or mechanical application on a large variety of substrates, such as cement and calcium sulphate screeds, mastic asphalt screeds, timber planks, OSB boards, chipboards and old load-bearing ceramic tiles.

Also suited on top of heated screeds, electric underfloor heating elements and thin-layer warm water underfloor heating pipes (as bonded system).

It forms a load-bearing underlay for all common and demanding floor coverings, like ceramic tiles and factory natural stones, parquet, carpets, PVC coverings, vinyl or linoleum.

It can be used as wear layer (without surface covering) in a layer thickness > 6 mm on mineral substrates in residential rooms.

Thanks to its low-stress hardening and excellent flow properties, the product can be applied in a single operation up to a layer thickness of 20 mm.

For use indoors.

Description

weber.plan 813-20 is a dry, factory-made, cement-based and polymer-modified self-levelling floor underlay

Composition

Special cement, selected aggregates, polymers, additives

Main features

- EMICODE EC 1 ^{PLUS}: very low emission of volatile substances
- CE marking: CT - C30 - F7
- resistant under chair castors (in accordance with DIN 12529) in layer thickness ≥ 1 mm
- for high-demanding floor coverings
- ideal substrate for XXL ceramic tiles
- also for heated floor constructions
- easily provides absolutely smooth floor surfaces
- high yield
- pumpable and ergonomic application with machine technology
- self-levelling without lap marks
- self-venting; no spiked roller is necessary
- crack-free and stress-free during setting
- quickly open to foot traffic and ready for floor covering
- can be directly used without covering in case of light mechanical loads

Technical values

Pot life:	approx. 30 minutes
Maturing time:	approx. 2 minutes
Application temperature:	$\geq +10^{\circ}\text{C}$ - $\leq +25^{\circ}\text{C}$
Flexural strength (28 days):	$> 7 \text{ N/mm}^2$
Compressive strength (28 days):	$> 30 \text{ N/mm}^2$
Consistency (slump/flow rate):	250 - 270 mm, flow ring: $\varnothing 68 \text{ mm}$ /height 35 mm)
Layer thickness:	1 - 20 mm
Open to foot traffic:	approx. 2 - 4 hours
Open to light mechanical loads:	approx. 4 hours
Ready for covering:	approx. 2 - 4 hours in case of ceramic tiles
CE marking:	CT - C30 - F7

Quality control

weber.plan 813-20 is subject to a regular quality control by self-monitoring according to EN 13813.

General notes

- Do not process already stiffened material.
 - All characteristics mentioned in this data sheet are based on a temperature of +23°C without draught and a relative humidity rate of 50%.
 - Higher temperatures and lower humidity rates accelerate, whilst lower temperatures and higher humidity rates delay the setting process.
 - In case of use in layer thicknesses > 10 mm on anhydrite screeds, use the 2-comp. epoxy resin primer weber.prim 807 and scatter oven-dried silica sand weber.sys Hartquartzmaterial (0.1 – 0.5 mm) up to saturation. After 16 - 24 hours sweep away the excess sand.
 - In case of use on floating constructions and on heated screeds all walls and upstands (pillars, columns etc.) within the floor should be separated with a 8-mm thick insulation foam strip; it must reach downwards from the substrate up to the upper edge of the final floor covering.
 - Mastic asphalt screeds must show a strength of at least class IC 10.
 - For any information relating to application, substrate or special features of floor, request technical advice
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Special notes

- In case of application in wet-duty rooms special measures for waterproofing should be taken, for ex. with weber.tec 822, weber.tec Superflex D 2 or weber.xerm 844 (bonded waterproofing layers).
- The laying of ceramic tiles and slabs with weber.xerm 844 additionally contributes to decoupling and impact sound reduction.
- Do not walk on primed timber floors with nail shoes for further processing.
- In case of wooden constructions, it is necessary to limit the application area; arrange dummy joints for special structural features and special room geometry i.e wall entry points, doorways, wall recesses. Maximal size of each individual working section < 16 m²
- If used on electric underfloor heating elements or on thin-layer warm water underfloor heating pipes (as bonded system) a covering of the elements/pipes by weber.plan 813-20 of at least ≥ 5 mm must be provided.
- Maximal application thickness on mastic asphalt screeds: 5 mm
- A too high water dosage will reduce the mechanical strengths and increases the risk of cracks and shrinkage.
- Use indoors only.

Substrates

Cement and calcium sulphate screeds, mastic asphalt screeds, heated screeds, timber planks, OSB boards, chipboards, old load-bearing ceramic tiles, electric underfloor heating elements and thin-layer warm water underfloor heating pipes (as bonded system) are allowed substrates.

Substrate preparation

- The substrate must be solid, load-bearing, clean, dry, dimensionally stable, and free of dust, contaminants and all adhesion-impairing substances.
- The contraction and the flowing of the material in the joint areas must be avoided by appropriate measures, for ex. with a flexible insulation foam strip.
- Non-absorbent, smooth, mineral surfaces (e.g. old load-bearing tiles): grind, vacuum and use the primer weber.prim 802 or 803.
- Old or dirty mastic asphalt screeds (with bad sand coverage): roughen mechanically; afterwards use the primer weber.prim 803.
- Mastic asphalt screeds with sufficient sand coverage: no priming is necessary.
- In case of rising capillary damp, reverse damp or pressure of water vapour from the substrate, apply 2 coats of epoxy resin as vapour-barrier, e.g. weber.prim 807 directly onto the concrete substrate and scatter oven-dried silica sand weber.sys Hartquarzmaterial (0.7 - 1.2 mm) over the fresh second coat up to saturation. After 16 - 24 hours sweep away the excess sand.
- Absorbent cement-based substrates: use the primer weber.prim 802 diluted with water 1 : 3 parts by volume; on small areas (approx. 30 m²) use the primer weber.prim 801.
- Calcium sulphate screeds: grind, vacuum and use the primer weber.prim 802 diluted with water 1 : 1 part by volume in case of layer thickness 1 - 10 mm; use the 2-comp. epoxy resin primer weber.prim 807 in case of layer thickness 11 - 20 mm.
- Timber planking and chipboard floors with firmly joined tongue and groove: remove (if necessary, by grinding) from all residues of care products, e.g. waxes. The floors must not be springy and be well fixed to the wooden planks. Fasten with wood screws, if necessary. Close wide joints with the acrylic joint sealant weber.fug 888.
- Level out deeper holes and recesses (> 20 mm) with weber.plan 813-20 blended with max. 30% (6 kg) by weight of sand (0 - 4 mm).
- Refer to the chart of application fields weber.plan 813 for information about primer in accordance with the substrate.
- The substrate preparation must be adapted to the specific job site conditions.

Working instructions

Mixing

- Mechanical application: use the mixing and pumping machine m-tec Duomix 2000 which is authorized by Weber.
- The hoses should be at least 40 m long in order to provide to ensure optimum processing properties.
- The pump and delivery hoses should be emptied if idle for over 20 minutes.
- Before pouring the hoses should be pre-lubricated with a slurry of weber.plan 813-20 or cement 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 mortar.
- A steady consistency is a pre-requisite for the final properties of the levelling mortar. Monitor the consistency regularly via slump test. Take mixed material in the 1.3 liter flow tin, pour it into the flow ring and measure the slump (250 -270 mm) on the flow table. The mortar must not show any bleeding.
- Manual application: pour the specified amount of gauging water (approx. 5.2 liters of water per 20 kg bag) into a suitable bucket, add powder and mix intensively using an electric drill and an appropriate stirrer (for ex. weber.sys Rührpaddel no. 8) for at least 3 minutes, until an easy-flowing and lump-free mortar is obtained. After a maturing time of 2 minutes, stir again briefly at slow speed.

Application

- When the material is pumped, limited working sections with a maximal width must be determined, in order to ensure the full workability of the product (mixing, levelling and smoothing) within its pot life.
- If the specified width is exceeded, use the self-bonding foam strip weber.sys Absperroleiste/weber.floor 4965 in order to form bays and stop ends.
- Pumping is carried out in working sections so that a new section is pumped as quickly as possible and to maintain a wet edge.
- Pour out the mixed material, starting at the lowest point of the substrate and distribute to the required layer thickness with the notched blade scraper weber ABS Schwedenraker in 30 cm width (for angles and small surfaces) and in 60 cm width (for larger surfaces) which will assist the self-levelling process, or with the flat rake weber Großflächenraker (without notched blade) for smoothing works at a shallow angle.
- Continuous application of individual mixtures will avoid visible breaks between the working sections.
- When applying weber.plan 813-20 on top of itself use the primer weber.prim 802 on the hardened surface. Apply the new layer of weber.plan 813-20 after approx. 4 hours.

- Protect freshly installed surfaces from draughts, and the direct effects of sun light and heat.
- Clean mixing equipment and tools with water (fresh product). Hardened material must be removed mechanically.
- Refer to the chart of application fields [weber.plan 813](#) for information about primer, layer thickness and eventual use of woven mesh [weber.sys 987/weber.floor 4945](#) in accordance with the substrate.

Readiness for covering

- Covering with ceramic tiles and natural stones: after 2 - 4 hours
- Covering with carpets and steam-tight floor materials: after 3 days
- Covering with parquet: after 7 days
- For applications with layer thicknesses up to 5 mm, carpets, steam-tight materials and parquet can be laid after 24 hours.
- Coverings with reactive resin-based coatings and paints/sealers, for ex. epoxy resin sealers/coatings [weber.floor 4725/4736/4740/4774](#) after 72 hours. Refer to the technical data sheets.
- In case of calcium sulphate screeds, the floor covering material can only be laid, when a residual moisture content of 0.5 CM-% (by weight) is reached. It is measured by the carbide method (carbide hygrometer) as a rule.

Practical information

Water demand:

approx. 5.2 liters/ 20 kg

Application thickness:

1 mm - 20 mm

Tools:

Mixing and pumping machine m-tec Duomix 2000, electric drill + stirrer
[weber.sys](#) Rührpaddel no. 8, slump test tools (tin, ring and table), notched blade scraper [weber ABS Schwedenraker](#) (30 cm width for angles and small surfaces and 60 cm width for larger surfaces), flat rake [weber Großflächenraker](#) (without notched blade), flat trowel, spike roller

Storage:

The product can be stored at least 18 months in its original unopened packaging, if kept dry and protected from moisture.

Technical Data Sheet



Consumption

per mm layer thickness: approx. 1.5 kg/m²

Packagings

Type	Sales unit	Number / euro-pallet
Plastified bag	20 kg	48 bags

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.