MICROTERRAFLOOR®

Thin-layer, polished decorative screed 10 – 20 mm

DESCRIPRION

MICROTERRAFLOR is a system of making thin-layer, grinded and polished industrial and decorative floors.
To be used in new and existing concrete surfaces alike.

USE

- Production of even, smooth, abrasion-resistant, thin-layer, troweled concrete floors that are suitable for intensive use on new and repaired concrete foundations
- Perfect for flats, shopping malls, shops, production plants, schools, airports, train stations, car showrooms and sacral buildings.

PRODUCT CHARACTERISTICS

- Look similar to granite
- Mirror-like smoothness and gloss
- Easy to clean
- Long life
- Easy implementation
- High mechanical and chemical resistance
- For indoor and outdoor applications
- Wide range of colours

APPLICATION CONDITIONS

The temperature of the ambient and foundation during the works and for the next 5 days should be between +5°C and +30°C. The surface made should be protected from losing water too quickly as a result of, for example, high temperatures, draught, sunlight operation etc. In order to ensure high quality and uniform colour, all works should be performed with suitable tools in an area protected from dust, EPS balls and similar impurities.

WET TO DRY VERSION

PREPARATION OF THE FOUNDATION

The foundation must be of carrying capacity, hard, stable, dry, compact, with no cracks and free from impurities. The compressive strength of the concrete foundation should be no less than 25 N/mm^2 and the peel strength - no less than 1.5 N/mm2. The foundation should be cleaned mechanically, e.g.: by shot blasting or milling. Weak or soft foundations (such as asphalt), which might crack or deform under loads, should be removed.
In order to level the surface, universal polymer-cement floor base UNIFLOOR can be used, according to the technical sheet of the product. Foundation prepared in such a manner is then grounded and the bonding layer is applied.

Grounding of the foundations with BAUGRUNT

Mix the contents of the package thoroughly and then dilute with water in the following proportions:
1 grounding – 1:5 (preparation : water)
2 grounding – 1:5 (preparation : water)
Spill the prepared solution on the foundation and spread with a wide, soft brush – saturate the foundation, but do not leave puddles of BAUGRUNT. The next layer of BAUGRUNT should be applied when the previous one is already dry.
CAUTION! Too short drying time, low temperature of the air and foundation, draught, and high humidity may damage the grounding layer and, as a result, lead to the creation of air bubbles in wet mortar, and also cracks and detachments.
On the surface prepared in this way apply BAUBOND.

Preparation of BAUBOND bonding layer

Mix BAUBOND with water in the proportion of about 8.3 – 10 l of clean water for 25 kg of dry BAUBOND mixture. Slowly pour the mortar into the water and mix for 5 minutes with a mixer mounted on a slow-speed drill (400 rpm) until a homogenous mass without lumps is obtained. The prepared mortar must have proper viscosity allowing to spread it well on the foundation. Prepare portions which will be used within about 45 min.
CAUTION! In the wintertime the material should be kept in a heated room prior to mixing. Low temperature of the material may cause that some additions will not be able to dissolve during mixing. Too high temperature of the material will change the consistency of the mortar and result in too quick bonding.

Applying BAUBOND bonding layer

Spread mixed BAUBOND on prepared foundation with a hard brush. Mortar that has been mixed with water and left in the bucket for more than 5 minutes should be mixed again.
The period from spreading the bonding layer and spreading the in-built layer should not exceed 10 min.
CAUTION! Failure to observe the above recommendations will significantly reduce the adhesion and will cause detachments.

WET TO WET VERSION

MICROTERRATOP mortar can be applied on the surface of freshly-made floor concrete, of low contraction properties, class no less than C20/25, made in accordance with design assumptions, or on cement and polymer universal floor base UNIFLOOR in accordance with the technical sheet of the product.
Before mortar MICROTERRATOP is spread, the concrete/base must achieve proper hardness. The setting time of concrete/base depends on the temperature, relative humidity of the air etc. The surface of the concrete base must not get too hard, therefore its condition must be frequently checked. As a result, selection of the optimal moment to begin application of MICROTERRATOP mortar will be possible. The works may be commenced when the imprints of feet on the concrete/base are not deeper than 3-4 mm. Remove excess of cement paste from the surface of the concrete/base and refresh it with a disc. Then start applying prepared MICROTERRATOP mortar.

PREPARATION OF TERRATOP MORTAR

To 3.0-3.3 l of clean, cold water pour 30 kg (a bag) of dry MICROTERRATOP mixture and mix for 3-4 minutes in a concrete mixer or with a slow-running drill with a mixer until a homogenous mass is obtained. Prepare portions which will be used within about 15 min. Do not add more water than the instructions indicate, as this will decrease the strength and increase the contraction of the mortar. In the wintertime the material should be kept in a heated room prior to mixing. Low temperature of the material may cause that some additions will not be able to dissolve during mixing. Too high temperature of the material will decrease the spread of the mortar and result in too quick bonding.

APPLICATION PROCESS OF TERRATOP MORTAR

Spill prepared MICROTERRATOP mortar on the foundation and spread to the desired thickness using a distance scraper or a long float along with a laser levelling instrument or spacer strips, while smoothing the surface with a long float until uniform, smooth structure is obtained. During application workers should walk on BAUBOND bonding layer and on the fresh floor in spiked boots.
When the surface hardens to a degree that it can be stepped on without leaving too deep traces, troweling with power trowel should be commenced.
The initial troweling should be made with a disc and subsequent ones with blades set at gradually larger angles, until a smooth, even surface is obtained. Immediately after the troweling process is completed, but not earlier than when shoe imprints may be left on the floor, maintenance preparation TERRASEAL should be applied in the amount of about 0.15–0.20 l/m^2. Apply the sealer on the dry surface with spraying method and spread it with a microfibre mop, until the entire surface is covered, so that the floor remains wet for 15 minutes. Repeat the application in faster drying places.

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When the maintenance preparation has completely dried up, cover the surface with polyethylene sheet to provide additional protection from external factors. The sheet should be left on the floor throughout the maturation period until the grinding works begin. Expansion joints should be cut when the saw blade does not tear the aggregate off MICROTERRAFLOOR. The sheet should be removed from the floor for the time of these works. When the contraction joints are cut, the whole surface should be covered with sheet again. Filling of joints with BAUFLEX sealant should be performed during or immediately after the grinding works on the top surface of MICROTERRAFLOOR are completed.
Operating conditions of maturing MICROTERRAFLOOR: pedestrian traffic is permitted after 7 days from the moment of building in. Complete load of the floor may be used after the grinding process, but not earlier than 28 days from the moment of building in. 7 days after building in, if the temperature does not drop below 20°C, the grinding process may be commenced. Lower temperature will slow the maturation process down and extend the period after which grinding may be started.

GRINDING PROCESS

The surface of the floor must be homogenous and free from impurities. Before commencing the grinding process, all impurities (dirt, dust, oil spills, impregnations, care products) should be removed mechanically and all defects and damages repaired.
Necessary tools:
- Levighetor Max (concrete up to 500m^2) or Expander 750 (concrete over 500m^2)
- SuperVak KY 80 vacuum cleaner
- Metal diamonds: DT0,DT1,DT2 (240mm)
- Polishing diamonds: MCK 3, MCK 4, MCK 5, MCK 6, MCK 7 (75mm)
- Chemical agents: TERRASEAL, TERRACOAT, AKTIVATOR

The grinding process is started with metal diamond discs Klindex *DT 0* placed on the planetario. Grind the floor until perfectly even level is achieved. Repeat the process using metal disks Klindex *DT 1, DT 2*. The walls must not be approached, as this may cause breaches; the recommended safe distance is 5 cm. Also, working crosswise is recommended (first grind the surface from up down and from down up, then from right to left and from left to right.) While working with diamond and metal disks DT diamonds should be sharpened with Aktivator. The next stage is work with polishing disks. This will finally eliminate shallow scratches. Commence works with diamonds Klindex MCK 3. Grind also crosswise, but this time the walls can be approached. When the works with disc MCK 3 is completed, the floor must be vacuum-cleaned and washed.
The next stage is the application of TERASEAL. Apply the preparation on the dry surface with spraying method and spread it with a microfiber mop, until the entire surface is covered, so that the floor remains wet for 15 minutes. Repeat the application in faster drying places. Then wait 3-6 hours depending on the ventilation of the room.
The next stage is grinding using diamonds MCK 4, manner of work like in case of MCK 3.
The final stage is polishing of the floor using diamonds MCK 5, MCK 6 and MCK 7 and brightening with natural hair pads and TERRACOAT preparation. When the grinding process is finished, apply TERRACOAT preparation on dry, clean and vacuum-cleaned surface. TERRACOAT should be applied using a high-quality microfiber mop, so that no streaks are left on the surface, as these will remain visible and will negatively influence the appearance of the floor.
When the surface has dried up (after about 60 minutes), it should be polished with a delicate, white pad or special diamond polishing pads which increase the temperature of the polished floor to about 30°C. Depending on the required gloss, the activity may be repeated 2-3 times.

CAUTION! Before commencing polishing works, it is recommended to perform a trial fragment of the floor measuring about 5m^2 in order to establish the wear and consumption of the tools, chemical agents and to establish the final effect that will be achieved.
Losses in the floor, which happened due to mechanical works, should be completed with TERRAFILL, in accordance with the technical sheet of the product.

All contraction and dilatation cracks as well as working cracks in the foundation should be reconstructed in the applied layer of TERRATOP mortar and filled with BAUFLEX sealant or BAUFIX filling insert.

CLEANING TOOLS

The equipment and tools should be cleaned with water immediately after use. Hardened material can only be removed mechanically.

HEALTH AND SAFETY PRECAUTION

The mixture contains cement - mixed with water gives an alkaline reaction. Avoid breathing, protect eyes and skin. In case of contaminations: clean eyes with plenty of water, wash skin with soap and water. Working areas should be ventilated. Keep away from the children.

STORAGE

6 months from the date on the packaging, if stored in original, tightly closed packaging, in ventilated rooms, at the temperature between 5°C and 25°C.

PACKAGING

30 kg bags, pallet 35 x 30 kg = 1050 kg

MISCELLANEOUS INFORMATION

All the information herein refers to products stored and used according to our recommendations, has been presented in good faith and takes into account the current state of knowledge and experience of BAUTECH. You are obliged to use the product in accordance with its intended purpose and BAUTECH's recommendations. All the technical information provided is based on laboratory tests and trials. Out-of-laboratory tests may give different results due to the conditions, location, manner of application and other circumstances that are out of BAUTECH's control. Any different recommendations issued by our employees must be made in writing; otherwise, they shall be deemed null and void. These instructions replace all the previous ones and make them void.

The surface of the made floor may have differences in the hue and colour saturation, appearance (uneven, similar to the natural distribution of aggregates, the aggregate losses) depending on the conditions and manner of performing works, drying conditions etc. This is not a defect of the product and does not influence the technical parameters and functional properties of the floor. Colour diversification of the floor may also result from non-homogenous concrete foundation.

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TECHNICAL DATA

Product compliant with EN-13813

Fire rating	$A1_{fl}$
Release of corrosive substances	cement mortar (CT)
Compressive strength after 28 days	30 N/mm^2 (C30)
Bendig strength after 28 days	10 N/mm^2 (F10)
Abrasion resistance – Boehme test	A6
Thickness	10-20 mm
Mixing proportions	3,0-3,3 litres of water/ 30 kg
Consumption	
MICROTERRATOP	about 2,0 kg/m^2/mm
BAUGRUNT	0,1 - 0,2 l/ m^2
BAUBOND	1,8 kg/ m^2
TERRASEAL	0,21 - 0,27 l/ m^2
TERRACOAT	0,02 - 0,06 l/ m^2
Application temperature	od +5°C do +30°C
Usability*	pedestrian traffic: 14 days complete resistance: 28 days
CE	09 EN 13813 CT-C30-F10-A6

*At the temperature of +20°C and relative air humidity of 65%: Higher temperature and lower humidity shorten, while lower temperature and higher humidity increase the specified time.

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