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DECOR

MICROCEMENT COATING SYSTEMS



www.thrakon.gr
TECHNICAL SUPPORT
info@thrakon.gr



In Greece, microcement is well established in applications, knowledge coming from ages ago. Microcement was mainly applied in secondary areas, as well as in areas with waterproofing requirements (bathroom, external stairs, etc.) since the early 20th century.

Furthermore, microcement was broadly applied in the Aegean Islands, due to the particular style it gives to the construction. Traditionally, cement (mortar) was squeezed with the trowel until the surface became smooth.

Nowadays, microcement products have been developed further providing numerous colour shades, a wide range of decorative surfaces, high flexibility, strength and durability.

Modern architecture is directed to minimal design, with Microcement giving the final touch. THRAKON has created an integrated concept, composed from different systems, which combined with the style chosen by the architect, giving a unique aesthetic effect.

THRAKON's microcement coating systems achieve excellent adhesion with the substrate, offering excellent workability, and, in conjunction with fiberglass and special resins contained in the mortar, ensure high mechanical strength and excellent moisture protection. THRAKON pioneers by offering three different microcement coating systems:

- DECOR FINE PLUS (1 component)
- DECOR (2 components) and
- DECOR SUPERIOR (3 components)



Countless Shades

THRAKON gives you the ability to select your desired shade from our CLIMAPLUS fan deck. CLIMAPLUS fan deck offers hundreds of shades, which in combination with different styles, creates distinctive aesthetic effect.

Application

When applying microcement, each style is unique and does not resemble others, giving a unique effect. This highly depends on the application techniques as well as the architect's creativity.

THRAKON's microcement coating systems are in line with modern design and are a unique tool in the architect's hands. Moreover, the product is designed in such a way, providing the ability to the technician to create unique techniques, according to the aesthetics of the customer or architecture of the surrounding area.

New trends in architecture, combined with the turn to environmental friendly products, make DECOR the ideal solution for multiple applications. DECOR can be installed in gyms, shops, hotels, showrooms as well as in homes, offices, spa, outdoors; even tables, worktops, sinks, bathtubs, swimming pools etc. THRAKON's microcement coating systems can be applied on horizontal, vertical or inclined surfaces, on substrates such as concrete, brick and cement. Furthermore, it can be applied onto existing floors like mosaic, marble or ceramic tiles. After pressing the mortar and drying, follows the protection of the surface with the appropriate varnish of THRAKON, which will protect and waterproof our application.

Advantages

- ✓ The only 3-component microcement epoxy system in Greece
- ✓ Suitable for application in small and larger thicknesses
- ✓ Smooth finish
- ✓ High mechanical strength
- ✓ Unique combination of shades which are available from CLIMAPLUS fan deck
- ✓ DECOR works perfectly with FMF 150 grouts of THRAKON (26 shades) creating even more styles



Integrated microcement systems (DECOR, DECOR FINE PLUS and DECOR SUPERIOR) are the innovative solutions proposed by THRAKON. With THRAKON's microcement coating systems, you can decorate distinctly masonry surfaces or floors, achieving an excellent result.

With DECOR, DECOR FINE PLUS or DECOR SUPERIOR you can create colored decorative surfaces with the traditional Greek Cycladic style by giving artistic effects. It is applied on horizontal or vertical surfaces of concrete, plaster, plasterboard, cement and other substrates once the substrate has been made prepared accordingly.

It is the ideal solution for special structures such as benches, sinks, showers, swimming pools, flower pots, ladders and for surfaces with strong contractions – expansions (eg. Floor heating).

The advantage of THRAKON's system is the easy tinting flexibility, by giving the opportunity to the applicator to purchase the colorant from our business partner that has a Thrakon tinting station immediately, diminishing thus the lead time for the colorant

THRAKON's microcement coating systems provide high mechanical strength, combining ideally tradition with the minimal influences from modern architecture.

Application Areas

THRAKON offers the option of choosing between three systems: DECOR FINE PLUS (1 component), DECOR (2 components) and DECOR SUPERIOR (3 components). When mixed with the suitable pigments (DECOR ART for 2K, DECOR ART SUPERIOR for 3K) in liquid form, may be used as microcement on old and new floors, walls providing a multitude of different shades.

Applied indoor or outdoors, on horizontal or vertical surfaces, concrete, plaster, plasterboard, cement and other substrates once the substrate has been prepared. Also used for special constructions such as countertops, sinks, showers, flower pots, stairs, floor heating, swimming pools, etc.

THRAKON pioneers by creating a 3 components microcement system. DECOR SUPERIOR offers high mechanical and chemical strength, high flexibility, excellent adhesion and very smooth final surface, giving a unique final result.

DECOR Microcement Systems are ideal for new construction or properties under renovation, meeting the most demanding design requirements:

- **Homes**
May be applied indoors and outdoors, giving a unique style
- **Hotels**
Reception areas, bedrooms and outdoors (hallways, swimming pools)
- **Shops, gyms, showrooms**
Ideal for the architect who wants to propose modern design solutions, in various styles
- **Decoration Elements**
Can uniquely highlight structures such as tables, workbenches, built beds, sinks, bathtubs etc.

Application Thickness

Application thickness depends on the evenness of the substrate and the type of application. THRAKON systems give you the flexibility to apply them even in small thicknesses without problems.

Generally, minimum application thickness is 1mm, but this also depends on the technical requirements of each application. THRAKON strongly recommends minimum application thickness as follows:

- **Wall, plasterboard and cementboard: 2 mm**
- **Smooth floors: 2-3 mm**
- **Non-even floors: 4-5 mm**
- **Old pavings: 2-3 mm**
- **Wet areas (bathrooms, swimming pools, external floors, etc.): 3 mm**

* For floors and rooms with high hydrostatic pressures (eg swimming pools) THRAKON recommends the application of three components microcement system (DECOR SUPERIOR)



Application procedure for DECOR Microcement System

Step 1 Surface cleaning

Before starting application we need to protect the surrounding areas from getting dirty from application. This can be done by covering neighbouring areas with a plastic sheet, while protecting the edges of application with paper tape.

ATTENTION: Substrate must be clean, solid and as level as possible. Crumbled plasters (masonry) must be repaired by using the fast setting repairing plaster of THRAKON, WRM 550*. Repairs should also be made at the floors, by repairing cracks or gaps on concrete with one of THRAKON's repairing products (WRM 525*).

*For detailed application instructions please refer the data sheet of each product.



Substrate surface



Surface cleaning



Surface ready for application

Step 2 Waterproofing surface

There are cases where measures against moisture should be taken, in order to protect microcement from potential problems in the future:

Applications ought to be waterproofed them from moisture problems are:

- DSF 353 SUPER ELASTIC*:

Brushable, 2 component waterproofing mortar, high elasticity, bridging small cracks (consumption: 1,5kg/m² per 1mm layer thickness)

Two-component waterproofing products are highly flexible, resistant to expansions and contractions, and offer the ability of crack bridging.

Addition of water during preparation of mixture is not required. The application of brushable waterproofing slurries should be from two to four hands, crosswise, in order to achieve optimum results.

- Terraces and generally horizontal surfaces with possibility of standing water
- Swimming Pools and Water Tanks
- Bathrooms and other wet areas
- Areas with hydrostatic pressures



*For detailed application instructions please consult the data sheet of each product.

Step 3 Surface Priming

Select the appropriate primer for the proper preparation of application area, depending on the surface.

Absorbent surfaces

For absorbent surfaces you must use GLX 292, a deep penetration acrylic primer:

- GLX 292 FLEX PRIM: Ready to use (consumption: 50-70 gr / m²)

After applying the primer accordingly to the above instructions, the next day, you can move to the next stage which is the application of microcement.



Masonry priming



Floor priming



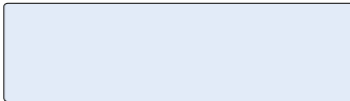
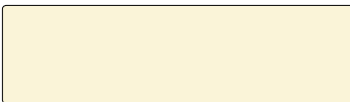

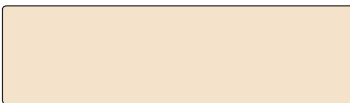





Floor priming (Quartz primer)

Non-absorbent surfaces

For non-absorbent surfaces (mosaic, marble, tiles and concrete) you must use the quartz sand primer:

- GLX 190: Ready to use (consumption: 400 gr / m²)

Step 4 DECOR ART Shade selection

	White		TH 263
	TH 059		TH 283
	TH 083		TH 298
	TH 088		TH 363
	TH 153		TH 367

The above shades are indicative. THRAKON offers a choice of more shades by choosing the tone you want from CLIMAPLUS fan deck.

Step 5 THRAKON DECOR Mixture preparation

The first step is to mix component B of DECOR (5kg liquid resin) with DECOR ART pigment.



Adding DECOR ART

The amount of water to be added depends on the application (wall or floor). Typically, the application on a wall requires less water (tight mixture). The water to be added varies depending on the desired workability from 1,5 kg to 2,0 kg, in order to create a uniform creamy slurry without lumps.

Leave mixture still for 3 minutes, until it matures. Then stir again and start application.

In a clean bucket pour the 5kg of the emulsion (component B). Then add a small amount of water in DECOR ART and stir the pigment. The next step is to pour the content of DECOR ART in the bucket containing the emulsion. Make sure to empty the entire content of DECOR ART. Stir the liquid mixture by using a low speed mixer (300 rpm/min), until we get a homogenous mixture and then add the bag with 25kg mortar, while stirring. During this process add the necessary quantity of water. Alternatively to DECOR (2-component microcement system), you can select 3-component epoxy microcement system DECOR SUPERIOR (see Technical Data Sheet).



DECOR Mixture preparation

Step 6 First layer application

The first layer of DECOR microcement should be reinforced by using CLIMAPLUS fibreglass mesh (160gr/m²). This fibreglass mesh should be placed on the first layer in order to enhance and improve the surface when:

- Application is made of a surface with joints (eg tiles) or other irregularities
- On substrates subject to receive large loads

- The application is made in areas with permanent humidity ("wet areas")
- The product will be subject to hydrostatic pressure
- The application thickness will exceed 3mm

Spread the product on the properly prepared substrate (Steps 1-3) with a toothed stainless steel trowel (teeth 6 - 10 mm).



The application is easier when made at 1 m layers of applied product.

Step 7 Fiberglass Mesh application

The next step is to insert CLIMAPLUS fiberglass mesh in the microcement by pressing it with the smooth side of the trowel. This will eliminate the possibility of entrapping air (bubbles) on substrate. The density of the fiberglass mesh is very high (160 gr/m²) in order to achieve increased strength and create an anti-crack system.

CLIMAPLUS fiberglass mesh should overlap each other by 10cm (black lines).

When application is made on floors, mixture is walkable after 6-10 hours, depending on weather conditions and application thickness.



The application starts from the corner of the room



Apply fiberglass mesh throughout the length



Cut the fiberglass mesh for shaping on doors

Step 8 Second layer application

Once the product gets dried on the surface, you apply the second layer of DECOR in order to cover the grid of the fiberglass mesh. The application is made "wet on wet" with a smooth stainless steel trowel. It is highly recommended to complete application for any surface (wall or floor) on the same day, to avoid compounds shown (stripes). Alternatively, the second layer can be applied after the first one has completely dried. Usually this is between 6-10 hours after applying the first layer (depending on atmospheric conditions: humidity and temperature).

If application between layers exceeds 20 hours, it is recommended to apply one coat of deep penetration primer GLX 292 FLEX PRIM. We should be particularly careful when applying the primer, especially during the winter period, to make sure that the material has dried completely.

When the application is on floor, we suggest the application team using insulation boards for stepping on them during application. This will help protecting the substrate from damages.



Fiberglass mesh to be applied next to each other, overlaying by 10cm



Along the way we use the smooth trowel to level the surface



Stopping ("cutting") of the application is made with paper tape

Once the material hardens, it can be smoothed if necessary, with a sandpaper, to remove trowel lines and give a smoother finish.



Step 9 Application of more layers

If required, you can apply more than two layers, until you achieve the desired thickness. Application is made with a smooth stainless steel spatula.



Application finish



Where necessary we apply more layers, with smooth stainless steel trowel.

Step 10 Application of top layer of microcement

The last layer is the one that will highlight our decorative style. The finishing layer could be the second layer or some of the following if we apply more than two layers. Exceptions are smooth and even substrates on which DECOR can be applied directly with a single layer, on which you will create the decorative style (e.g. renovation of painted wall, etc.).

The application of DECOR is made either with a smooth stainless steel spatula or with a stainless steel with teeth for application and then levelled with the smooth side.

The choice of the trowel and the dimensions of the teeth of the toothed spatula depends on the thickness of the layer applied by the applicator to provide the desired style. Usually for the last layer, if selected notched trowel, choose trowel with small teeth size (e.g. 4-6 mm).

Tips: We need to avoid application in periods of high temperatures or strong wind, as it may create cracks on the surface due to sudden evaporation of liquid mixture (sudden shrinkage). If this is not possible, we should protect the application area from sudden curing by using appropriate means (such as air conditioners). Ideal conditions are 5°C to 35°C and moisture content under 70%.



11.1 FLOOR ART

“Renew any external or internal floor surface, giving it a modern style”

STAGE 1: Apply a thin layer of DECOR (Step 10), according to the desired shade for the background of the surface.



STAGE 2: Once the material is dried, rub the surface with wet (with clean water) sponged trowel, which will create the necessary conditions on the substrate for the applicator to create the desired style. Drying time for very thin layers is between 20-35 min and is affected by atmospheric conditions. For layers with larger thicknesses the time will increase accordingly.



STAGE 3: Then using a wet large rectangular smooth stainless steel spatula (American type) you press it on the surface in order to give a smooth end result. After a while and when material is dried you can be press the surface again after firstly spraying it with water for giving an even smoother result.

Instead of a smooth spatula you could use a trowel pressing surface with semicircular movements in order to give the desired style on the floor.

Then, at first with small stainless steel spatula for stucco you even the effects and then finish by pressing the surface with wide stainless steel spatula, making it as smooth as we want.



11.2 GROUT ART FINE

"Impress with grout designs, turning the wall into a work of art"

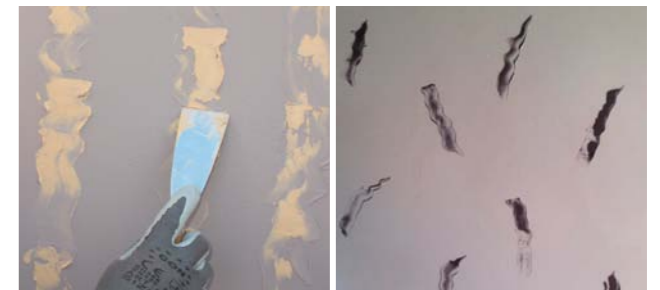
STAGE 1: Apply a thin layer of DECOR (Step 10), according to the desired shade for the background of the surface.



STAGE 2: Once the material is dried, rub the surface with wet (with clean water) sponged trowel, which will create the necessary conditions on the substrate for the applicator to create the desired style. Drying time for very thin layers is between 20-35 min and is affected by atmospheric conditions. For layers with larger thicknesses the time will increase accordingly.



STAGE 3: Mix in an empty bucket clean water with the desired shade of tile grout (THRAKON FMF 150 colour chart). The amount you need depends on the needs of style and artistic mood you have. Spread the grout on to the prepared surface with a small spatula. This is the phase where the applicator uses his abilities, so the spreading is irregular or specific, thicker or thinner.



STAGE 4: Then, you press the surface by using a rectangular stainless steel spatula, making semicircular or straight movements with your hands, in order to engage the grout with microcement and give a uniform decorative effect, with waves, lines or "bubbles". Then again press the surface with a large rectangular smooth stainless steel spatula (American type) which is firstly wetted with clean water in order, to give a smooth final result. After a while and when material is dried you can be press the surface again after firstly spraying it with water for giving an even smoother result.



11.3 GROUT ART

"Highlight styles with grout, giving the wall a unique effect"

STAGE 1: Apply a thin layer of DECOR (Step 10), according to the desired shade for the background of the surface.



STAGE 2: Mix in an empty bucket clean water with the desired shade of tile grout (THRAKON FMF 150 colour chart). The amount you need depends on the needs of style and artistic mood you have.



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11.4 SPRAY ART

"Unique styles with pigments, refresh and give a classy style to small and large rooms"

STAGE 1: Apply a thin layer of DECOR (Step 10), according to the desired shade for the background of the surface.



STAGE 2: Once the material is dried, rub the surface with wet (with clean water) sponged trowel, which will create the necessary conditions on the substrate for the applicator to create the desired style. Drying time for very thin layers is between 20-35 min and is affected by atmospheric conditions. For layers with larger thicknesses the time will increase accordingly.



STAGE 3: Mix the selected pigment in a container with clean water and apply by spraying the content on the surface.



STAGE 4: Then, you press the surface by using a rectangular stainless steel spatula, making semicircular or straight movements with your hands, in order to engage the grout with microcement and give a uniform decorative effect, with waves, lines or "bubbles". Then again press the surface with a large rectangular smooth stainless steel spatula (American type) which is firstly wetted with clean water in order, to give a smooth final result. After a while and when material is dried you can be press the surface again after firstly spraying it with water for giving an even smoother result.



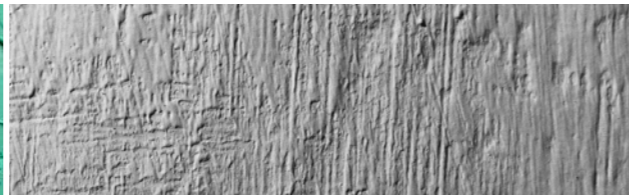
11.5 DECOR SPATULA

"Relief texture and unique style on the walls"

STAGE 1: Apply a thin layer of DECOR (Step 10), according to the desired shade for the background of the surface.



STAGE 2: Then, you press the surface by using a rectangular stainless steel spatula, making semicircular or straight movements with your hands, in order to engage the grout with microcement and give a uniform decorative effect, with waves, lines or "bubbles". For better results, the spatula should be wet before each press. The desired effect is created by pressing the wide side of the trowel, just enough to generate waves on the surface of the microcement.



Step 12 Priming of microcement

After at least 48 hours from the application of DECOR, you can proceed with the preparation of microcement for the protective varnish. You should be very careful, especially during winter months, to make sure that the material has dried thoroughly and all moisture completely removed from the mass. The general rule applied is waiting one day/mm layer thickness.

In this step, you apply microcement primer DECOR PRIM, for stabilizing the microcement and preventing shade differences.

Step 13 Final surface protection

The last stage of the application of the microcement system includes the selection of protective varnish. The choice depends on the requirements and exposure conditions of microcement:

- DECOR PROTECT: Water based varnish for indoor and outdoor use, for walls and floors, where we do not have standing water. Apply 2 hands.
- DECOR PU VARNISH: Two components polyurethane varnish, for floors and the most demanding applications. Provides high resistance to abrasion (floors), protects from UV rays and is suitable for permanent immersion in water (pools, showers, terraces, balconies etc.). Apply 2 hands

* Humidity of substrate must be <4% and ambient humidity <65%. Also, the temperature during the application and curing of the varnish must be from 8°C to 35°C. If lower temperatures applied or rainfall over the next 48 hours is expected, the application should be postponed.



Helpful Tips:

- Depending on the application, the creation of expansion joints is recommended: for internal floor surfaces peripheral joint is suggested, while when outdoors it is proposed to create joints every 35-40 m².
- As an overall rule, for indoors, maximum application surface without expansion joint should not exceed 8-10 meters, while outdoors the length should not exceed 7 meters.
- Existing expansion joints in the substrate should not be covered by application, as cracks may occur. This applies to expansion joints indoors and outdoors.
- Sealing of expansion joints in DECOR systems can be made with joint fillets or with suitable sealants from THRAGON (BACKER ROD, ELASTO PU/ ELASTO PU FLEX).
- THRAGON's DECOR (2 components) can be applied in areas with permanent presence of water such as in swimming pools, as well as in areas such as locker rooms, bathrooms, WC, etc.
- THRAGON's DECOR SUPERIOR (3 components) can be applied in areas with heavy traffic (external floors) and in applications with high hydrostatic pressures (swimming pools).
- The application of polyurethane varnish DECOR PU VARNISH for the protection of microcement in areas with permanent presence of water and / or hydrostatic pressure should be made in 2 coats.
- The surface of application must be properly prepared (repaired and primed).
- The application of DECOR microcement systems does not differ with underfloor heating.
- The application of microcement systems should be made by specialized application teams.
- In swimming pool applications, filling the pool with water must be done 7 days after application of DECOR PU VARNISH.