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San Deco Microcement Application Guide

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San Deco Microcement System Application Step-by-step Application:

1 - Base Preparation:

1.1 Labor Zone Preparation

Before starting work, we must allocate a zone in which materials and application tools will be placed and in preparation for what will be called the labor's zone.

For this purpose, a suitable place will be determined and it will be preserved by covering it with cardboard or plastic in order to avoid contamination during preparation.

San Deco Microcement application works are usually done after other works and the high adhesion strength of Microcement to any surface makes surface cleaning very difficult after leaving traces or residues, so it is especially used on coatings, walls, furniture, etc. We shouldn't leave traces in the fields

It is always recommended to keep this area neat and clean to ensure order and safety.

1.2 Humidity Control

Before application, the moisture content should always be measured and it should be made sure that it is within acceptable values. If there are wet areas, they should be dried before application.

1.3 Cleaning

Vigorously clean with a broom, mop or vacuum cleaner, depending on the degree of dirt on the surface. Apart from that, plaster, putty, adhesives, loose paint, etc., clean all kinds of material with a trowel.

During the application of San Deco Microcement, it is recommended to do a quick cleaning to remove the stains that will make the work difficult, especially on the surfaces plastered with mortar, independent or clustered sand stains.

1.4 Smoothing

In case of protrusion larger than 2mm that cannot be removed during the cleaning process, it must be removed with any sanding system, in certain cases it can be used on a hand sander.

1.5 Fissure or Loose Pieces Repair

During previous exploration visits, loose ceramic or terrazo pieces that needed repair should be detected before applying San Deco Microcement, but we may still find that any pieces were detected when starting work or loosened during other work. In this case, we will need to repair these parts immediately and we can do this by applying Base liquid to the joints so that the resin penetrates under the loose part. If the piece is completely loose, it must be removed and re-pasted.



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Regarding the fissures, it is necessary to do the following: first, we open the fissure further with a diamond disc radial grinder (grinding machine), then we apply the Deco Powder liquid to make sure it penetrates well. For this purpose, we wait about 15 minutes; then, it is repeated visually to the level that the fissure will not accept more resin. At this point, the liquid that fills the crack dries up and after that, the normal Microcement Base application is continued, the point to be noted is that the first coat of base application is prepared and applied more liquid than its normal form in order to better penetrate.

The rest of the work is applied by the mesh, which will be placed along with the first base coat, which we will describe in detail later.

1.6 Priming

Priming is a process to increase the adhesion of San Deco Microcement on some surfaces that quickly absorb moisture due to its large pores and make it difficult to apply and adhere.

It can be made in two ways, with a sponge trowel or roller Deco Sealent (2) or likewise a Base liquid can be applied as a single coat of primer, but must be diluted with 50% water.

It is necessary to apply a primer to the following types of surfaces:

- Plaster
- Self-levelling floors
- Weak mortars (that are easily removed)

The decision on whether to apply a primer to the following types of surfaces is up to the applicator.

- Plaster cardboard (Pladur)
- MDF

No primer is required for other types of surfaces.

1.7 Taping and Masking of the Area.

It is the subject of applying the self-adhesive paper to the relevant area in order to limit the area where the San Deco Microcement will be applied. The edges should be determined perfectly, it is recommended to determine a level of approximately 2 mm thickness by predicting the area to be covered by the microcement. Such tapes can be used on the same surface, color change or any simple drawing. Whenever any complex drawing is required, it is recommended to use vinyl masks drawn by the Graphic designer.

In order to achieve a correct finish and perfect finish, all existing paper tapes should be replaced before applying the top coat of San Deco Microcement. For a better result, it is recommended to remove these tapes after Deco Powder application, before starting the first of San Deco Microcement.



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2- Base Powder+Base Liquid Application-Base Coat

2.1 Surface Types and Need of base application

According to the type of surface where San Deco Microcement will be applied, it will be necessary or not to apply Base Powder.

The materials to form the base coat are unique and applied regardless of the surface type or coating color, has a superior granulometry (grain size distribution) than the coating material and is cemented greenish in color.

The purpose of the Base coat application is to be a bridge between the surface and the Color coat and at the same time to create a perfectly smooth surface. It is also used on floors to adhere the mesh to the floor, so it is always necessary to use it in floor applications. In wall applications, it is mandatory to use it if the area is open to wet use. If the surface is smooth, not rough, and it will not be used for moisture formation after application or if there is no load traffic on it, it may not be used.

Surfaces without base coat application: Plaster, plasterboard or MDF based walls for decorative purposes only:

Walls damaged by humidity or loads: **Always** apply base.

Floors: **Always** apply base.

The amount of Base coat required is used according to the condition and roughness of the floor. It will be sufficient to apply only one layer of base on all walls covered with very fine sand concrete. Two layers of Microcement base should be applied for all floors and the remaining surfaces.

2.2 Mesh Application

On all floors, it is necessary to apply a mesh before applying the first layer of Base Powder. Application of mesh makes the floor more resistant and planimetry.

The mesh is spread on the clean and dry surface, 1 or 2 cm space is left on the corners and edges without fully zeroing, and the two meshes spread side by side should not overlap each other and leave approximately 1 cm space. You can cut the excess pieces with the help of a cutter.

2.3 Preparation of the Material

The stated ratio is approximately given. It can change according to the room temperature; The aim is to achieve a sufficient consistency for the type of surface on which it will be applied, while at the same time the desire of the practitioner to reach a workable consistency.

In a plastic bucket, add 1 unit of Base Liquid for every 2 units of Base Powder. First add liquid into a clean bucket, then add the powder slowly and mix it with the help of a helix blender - mixer drill until it reaches



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the desired consistency. After mixing, wait for 5 minutes and at the end of the period, and then we have the opportunity to correct it as its real consistency will appear. Then add a little powder if the mixture is too liquid, a little liquid if it is solid, and mixed to reach the final state before the application.

2.4 Application of the First Coat

In order to apply the first coat of base, a mixture of sufficient consistency is prepared. If the surface is very porous, a more fluid mixture must be prepared, because some of the mixture moisture will be absorbed by the surface immediately. If the surface is less porous, a more viscous mixture should be prepared.

In floor applications, regardless of the type of surface, a trowel is used as an application tool, it is placed on the mesh material and adhered and it is applied by combing from the inside towards the edges to prevent rippling. In case of fluctuation or agglomeration, the part collected by the edge of the trowel is cut and smoothed. It is recommended to apply the material by pouring it in a small amount until it is very experienced in application.

In order to join the mesh strips by sticking the meshes positioned side by side, leaving approximately 5 cm free from each side and applying this area at the end while joining process is done. Bonding the mesh should be started from the farthest place to the mixture area, each applicator should work on a strip in areas where more than one applicator works. When the first applicator starts the application for about 2 meters, the second applicator will step in and start to stick his own strip, at the same time, he will combine the area left by the first applicator with his own strip, and so on until the entire surface is finished.

On walls where mesh is not placed, the function of the first coat base application is to create a smooth surface before Color coat application, therefore, it should be evaluated whether a second coat is required after the first coat is applied. If the floor is made of ceramic tiles or mosaic tiles, the joints should be covered with the first base coat to create a smooth surface for the second floor. Moreover, in these cases, time will not be wasted trying to keep the surface perfectly smooth with a single coat, as the results achieved will never be satisfactory.

2.5 Application of the Second Coat

After the first coat is finished, it should dry until it is ready to be sanded. Drying time varies depending on humidity and room temperature conditions and the porosity of the floor on which it is applied. It usually takes 1.5 to 3 hours to dry, but if the weather is very unfavorable, it can be dried with the aid of a fan, but it should be noted that the material should be dried naturally for at least the first 40 minutes.

It is recommended to sand the Base Powder coats with full sanding timing in order not to make much effort and to achieve better results. This is the moment when we observe that 50% of the surface is dry and the remaining 50% is still wet. Dry areas are easily detected because their color is paler.



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It is recommended to sand the floor manually at that time, because although it can be stepped on, it did not gain enough resistance, thus making sanding easier.

Complete drying of the layer should be avoided because the harder it is, the more energy and sanding time will be required, and at the same time the resulting surface will be rougher. In case the surface is completely dry, machine sanding with orbital hand sanders is recommended.

This situation gives the same effect on all surfaces except ceramic-coated walls without mesh, but since the adhesion to the surface is completely dry in ceramic-covered walls without mesh, we have to wait for the surface to become 100% dry. If we sand while it is wet, we can disassemble the material.

After the surface is sanded, the dust is cleaned and the surface is reviewed for the same corrective actions before applying the second Base Powder coat. These corrections could include: filling patches, holes, clumped lumps that were not previously detected, troweling of possible layers during net application, etc.

After the surface is restructured, the second layer of Base coat is applied, a similar mixture is prepared as in the first layer, but this time we can prepare the mixture in a slightly more liquid state as we do not have to stick the mesh, our aim with the second layer is to smooth the surface obtained.

It is recommended to use the trowel as a semicircle on all floors and apply with continuous movements without much manipulation.

After it is applied to the entire surface, drying and sanding is done as in the previous layer.

3- Deco Powder+Mixing Liquid Application -Color Coat

3.1 Preparation of the Material

As with the base material preparation, approximately 1 (one) part of Mixing Liquid should be mixed for every 2 (two) parts of Deco Powder powder. For this, we must use a perfectly clean plastic bucket (emptied Deco Powder buckets are recommended). First add the liquid, then add the powder slowly and the material is mixed simultaneously with the help of a screw-headed mixer drill. It should be taken care that the mixer drill does not come into contact with the bucket. Otherwise, the plastic parts that broke off from the bucket during the mixing process may enter the mixture and make the application difficult and spoil the aesthetic appearance.

The material cannot be used after mixing and waiting for a certain period of time since the consumption of the material is low and the mixture should not be prepared too much; only the amount of surface to be covered.

Mentioned ratio of 2X1 is approximate, but may vary depending on the type of application. The proportion of material to be used may vary depending on the aesthetic appearance intended to be applied on the wall or floor, environmental conditions and the color prepared. In general, to achieve a homogeneous consistency, lighter colors require less Deco Powder while dark colors require less concentrated liquid.

Note: Regardless of the application type, a minimum of two coats of Deco Powder will always be applied.



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In case of an unsatisfactory result in terms of aesthetics, 3rd coat application would be possible.

3.2 Application of the First Coat

After the application of Base Coat, care should be taken that the floor is dry and clean. Existing masking tapes should be replaced with new ones to achieve a thinner surface. The mixture is prepared as described in the previous article and applied with a steel trowel. The sole purpose of applying this coat is to cover the surface completely and create a smooth surface for the final Deco Powder coat. To do this, the tissues must be mixed with successive semi-circular movements. After the application, clumped parts that do not mix well may remain on the surface, but they are removed with sandpaper.

Under normal conditions, the drying time of this layer varies between 1.5 and 3 hours, but this time may vary depending on humidity, temperature or environmental conditions. As with the base application, this period can be shortened with the help of fans after the first 40 minutes of natural drying.

It is necessary to wait until 100% of the surface is dry before starting the sanding process of this layer. It can be sanded manually or by machine.

3.3 Application of the Last Coat

After the first coat of color is applied, the floor should be dry and clean, and the masking tapes that are placed to limit the edges of the surfaces must be changed to achieve a better result.

It should be on mind that the aesthetic aspect of the work will be revealed on this last floor, so the application should be done more carefully.

We must prepare a mixture with sufficient consistency according to the application area. While a mixture with a more liquid consistency is generally prepared on floors, it is more appropriate to prepare a more dense mixture for wall applications.

Generally, a drier application produces more joints, whereas a more fluid mixture creates a surface with a more uniform color. In addition, the pressure applied with a special cutting trowel (draw knife) and the number of layers affect the formation of these joints: the higher the pressure and the number of layers, the higher the density of the joints.

As with the rest of the applications, it is recommended to do the application in a semi-circle or “fan-like” motion so that each layer is intertwined. The formation of flat or folded joints should be avoided. This can be done by organizing the areas in which each practitioner will work.

The application should be arranged in such a way as to avoid interruptions or unfinished work that may cause joint areas that damage the aesthetic aspect. Once a surface application has begun, it should be finished until it has completely reached the edge or corner where the application will end.

After the application is finished and dried, 100% of the surface should be sanded and cleaned. It is



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recommended to use an orbital sander to sand this final coat and achieve a better finish. It should be noted that the sanding process should be done on the whole surface. It is also recommended that this process should be done in circular motions and never linear local sanding.

For more complex jobs, such as bathroom walls or furniture with inner and outer edges, all edges should be revised and manual sanded a second time.

4- Finish Application

Finishing applications are as important as other stages as they provide waterproof and abrasion resistance properties.

The shell life of the coating will depend on the protection and maintenance of these layers.

4.1 Deco Waterproofing Application

The surface must be thoroughly cleaned after the last Microcement coat has been polished (sanded). Although the final appearance of the surface is not yet visible at this point, it is appropriate to make a visual inspection to check whether the aesthetic aspect is as intended; If it is not as intended, the surface can be leveled by applying an extra color coat. Do not make localized repairs as this may cause some significant aesthetic damage. Reapplying the entire coat will always work better.

After the surface is clean and dried, Deco Waterproofing defined with the number 1 (one) is applied with a spray and the product is sprayed from a distance of approximately 30 cm to the surface. For a better result, it is recommended to apply an additional application on the surface immediately after spraying, always with a sponge trowel to remove possible drops in circular motions.

To accomplish this task, you must use solvent filter masks.

Depending on the application, one or two layers of Deco Waterproofing material is applied to normal usage surfaces such as floors or walls. Generally, only one layer of Deco waterproofing is applied to surfaces that will come into contact with water, such as shower cabins. Two layers of Deco Waterproofing should be applied in bathtubs and benches.

Note: The application of Deco Waterproofing does not create any visible layer, it is transparent because it superficially penetrates the mass of San Deco Microcement. The appearance after drying is the same as before application.

Drying time depends on weather and ventilation conditions. A minimum drying time of 40 minutes is recommended.

4.2 Deco Sealent Application

After the Deco Waterproofing material dries, two layers of Deco Sealent identified with the number 2 (two) should be applied. To do this, a sponge trowel should be used, pour small amounts of sealer on the trowel and spread it over the surface in circular motions; In addition, it can be spread directly on the surface



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provided that it is covered with sealer before, if this precaution is not taken and it is applied directly, there may be traces on the surface.

After the first coat dries, the second coat is applied in the same way. The drying time of each floor varies according to ventilation and weather conditions; a minimum of 30 minutes drying time is recommended.

4.3 Deco Wax Application

After Deco Sealent dries, two layers of Wax defined by the number 3 (three) will be applied. To do this, a sponge trowel is required to pour less than the amount of sealer on the wax and spread it in circular motions over the surface. Wax can also be poured directly onto the surface.

After the first coat dries, the second coat is applied in the same way. The drying time of each layer depends on ventilation and weather conditions; a minimum of 30 minutes drying time is recommended.

5-Final Considerations

5.1 Drying and Final Coating

After the job is finished, the surface can be walked on after 24 hours and it becomes completely waterproof after 48 hours. For this reason, necessary precautions should be taken in order not to step or wet it too early.

Although it can be walked on the ground after 24 hours, impacts, object drifts or the application of heavy loads should be avoided for the first 5 days after the job is finished.

Probably the work done is part of a complex work where other people will also work, so the surface must be covered for protection 72 hours after drying.

Different materials can be used for this purpose, but we recommend using porous materials such as: cardboard, pieces of wood, textiles, etc.

Note: If you are using corrugated cardboard, you should be careful that the smooth side is in contact with the San Deco Microcement.



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5.2 Cleaning and Maintenance

The durability of San Deco Microcement floors depends largely on the care and maintenance given to them. With periodic cleaning, dirt particles that scratch and wear on the floor are removed. In addition, thanks to the use of water-soluble self-polished Deco Wax and the polymeric residue they leave on the surface, we continuously renew the protective layer of the floor and provide more durability.

Cleaning

For this maintenance, there is no need to use any type of machine, as all these products can be applied with a mop. The frequency of cleaning will depend on the intensity of the surface use and is the same as cleaning any other floor and / or surface.

The correct washing of a San Deco Microcement floor may be carried out in two ways:

- 1- Simple washing: We recommend this type of washing periodically as long as the traffic is heavy. ; It can be done every day or at least 2 to 3 times a week. It is made with self-shine wax, water and mop to be added at the rates determined by the manufacturer. It is then left to dry.
- 2- Washing and Wax: These types of washes are usually done less frequently than previously stated and consist of cleaning the floor with a mop, water and liquid neutral soap at the rates recommended by the manufacturer. After the floor has dried, clean it again with water to which self-shining wax has been added to the rate specified by the manufacturer. Then it is left to dry.

If you want to achieve a higher gloss than the normal shine of the San Deco Microcement coating, you can rub the floor with a clean and dry mop after the self-shining wax water dries.

Walls require less maintenance. You can use furniture spray cleaners perfectly or just clean with water and neutral soap.



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Recommended Products

- FROSH PH NOTR (degreasing liquid cleaner)
- PRONTO (spray cleaner for furniture)

Accepted Products

- Bleach
- Dishwasher detergent

Never use!!!

- Anti Lime products
- Chemical substances and solvents in general
- Hydrochloric acid
- Anti-lime and dirt potent cleaner.



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Appendix A – Radiating Floor

Definition

Radiating heating floors are a low temperature heating system that consists of supplying heat to the floor through a series of pipes distributed over the entire surface where hot water flows.

Description

These pipes are placed three to five centimeters below the floor and have gaps between them ten to thirty centimeters. Water flows through said pipes at temperatures between 35 and 45 ° C to keep the floor at a temperature between 20 and 28 ° C and maintain a comfortable room temperature between 18 and 22 ° C. Mortar is poured on these pipes. Depending on the brand of the mortar, the applicator can diversify and decide, it can be self-leveling mortars from normal cement and sand mortar or special mortars. Whatever the case, this load is applied in thicknesses ranging from 3 to 5 cm.

San Deco Microcement Application over Radiating Floor

Due to the mentioned features, this type of floor requires a coating that allows heat to flow through it.

Microcement is perfectly compatible with this type of radiant floor heating because it is not affected by operating temperatures and also has a good thermal conduction coefficient thanks to its thinness.

The only problem with this type of floor is that due to the large thermal variations it is subjected to when the heating is turned on and off, cracks may appear in the mortar lining the pipes, thus transmitting to San Deco Microcement. To avoid this, we must take a number of preventive measures to minimize the risk of crack formation prior to the preparation of San Deco Microcement. This series of precautions should be taken into account before applying the mortar layer covering the pipes, as such measures do not work after hardening.

Preventive Measures

- **Make perimeter joints:** It consists in placing an expansion joint around a surface in contact with a partition or wall; it usually hardens by placing some kind of expanded polymer and is usually 5 and 10 mm thick.
- **Make expansion joints in surface changes:** Critical areas where cracks often appear are areas where there are sudden changes in surface dimensions, for example where we go from a narrow corridor to a larger room that is square or rectangular. It is appropriate that such connections coincide with the center of the doors to remain hidden when the door is closed.



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- Use special mortars: We recommend using special mortars that prevent cracking or cement mortars containing polymeric fibers and additives with improved properties to make this mortar that will cover the heating pipes.

After these precautions are taken, we will reduce the risk of cracks on the floor and then the risk of them occurring on the surface of Microcement.

This type of application on the floor is also done for the rest of the floor, taking precautions to comply with all expansion joints on the floor.

Appendix B – Color Table

Table I – Traditional System Colors

Name of the colors	Powder	Liquid
Concrete	Concrete	Mixing Liquid
Fume	Fume	Mixing Liquid
Stone	Stone	Mixing Liquid
Beach	Beach	Mixing Liquid
Snowy	Snowy	Mixing Liquid



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MESH



BASE POWDER



BASE LIQUID



DECO POWDER



MIXING LIQUID





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DECO WATERPROOFING DECO SEALENT

DECO WAX



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Sandpaper



Float



Corrugated Cardboard



Empty Buckets



Gloves



Brush



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Krep Tape



Cutter



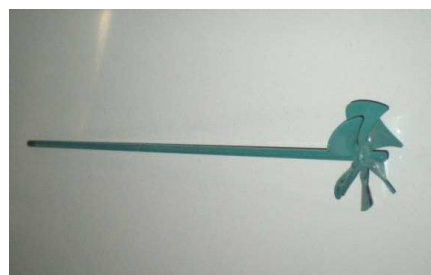
Metallic Trunk



Drawn Knife / Trowel



Mixing Drill



Helix Mixer



Radial Grinder



Trowels



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Extension Cable



Fan



Goggles



Measuring Tape



Atomizer



Sanding Machine



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Broom



Bubble Level



Halogen Spotlight



Knee Pad



Solvent Mask



Powder Valve Mask