

## TECHNICAL DATA SHEET

# **REINFORCED MICROCEMENT**

## Epoxy-cement system for seamless floors

May 23

TDS REINFORCED MICROCEMENT

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#### TDS REINFORCED MICROCEMENT



## **TECHNICAL DATA**

Name	REINFORCED MICROCEMENT
Description	Seamless finish for high-traffic floors made with cement and epoxy resin.
Composition	It is a 3 component system: A is a water based epoxy resin; B is the water based hardner; C is a powder with cement and inerts of quartz and marble
Where to apply	<ul> <li>This product can be applied only on interior horizontal substrates of the following kind: "".</li> <li>new cement screeds, that have completed the curing process, that is, at least after 2-3 weeks from their installation;</li> <li>on solidly attached existing tiles</li> </ul>
Application	By hand, with a trowel or with a roller, in either 2 or 3 coats
Workability Time	After mixing the components, the mixture is workable for 20-30 minutes
Colour	The material si creamy white color when the three components are mixed, but it can be colored in any color
Consumption	For a standard application: 1700 - 1900 g/sqm for two thick coats or three thin coats. Approx. 600-900 g/sqm per coat.
Certificates	Hardness by pencil Test ASTM D3363 = 6H Hardness shore ASTM D 2240 = 71 Slip Resistance tests DIN 51097 (92) : Smooth Finish = Slip angle 27° Anti-slip property DIN51130 method ramp test, surface "Smooth"= angle 16.8 - R 10 Resistance to compression at 7 g UNI 13892-2; 2005> 71 Nmm2
Ph after 30 days	8,1±0,20
Packaging	the material is sold per kg in any packaging required but with the following relation among the three components: A : 1; B : 2; C : 4

#### COMPONENTS BREAKDOWN DATA

	Comp.A: Epoxy Resin	Comp. B: Curing Agent	Comp. C: powders
Components	bisfenol-A-epicloridrina 1,6-EXANEDIOL GLYCIDYL ETHER GAMMA- GLYCIDOXYPROPYLTRIMET HOXYSILANE	Epoxy ammine Thickeners	White cement and quartz and marble powders
Diluent	water	water	-
Viscosity at 25°C	Pa.s=0,4-0,6 (ASTM D445)	mPa⋅s=9500 ± 2500	-

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Color /Gardner	Pt-Co 200 max (ASTM D1209)	< 6	-
Density	at 25°C kg/l 1.10 (ASTM D4052)	at 20°C g/cm3 1.08± 0.02	
Odour	sweet	low	-
Safety norms	Keep away from flames and sparks. Do not smoke. Avoid skin, eye and clothes contact. Do not breathe vapours and powders.	Keep away from flames and sparks. Do not smoke. Avoid skin, eye and clothes contact. Irritant	Protect eye Irritant Do not breath the powder
РН	10	Not applicable	11,3

## **A - INTRODUCTION**

REINFORCED MICROCEMENT is a professional epoxy-cement used to create seamless floor surfaces. It is a very hard, versatile, non-toxic coating that can be applied in different finishing styles, suitable for a variety of environments. The system uses a mixture of three components to which other products can be added to obtain different finishes.

## A1- COMPONENTS

The base is composed of:

A – Epoxy binder

B – Hardener for the epoxy binder

C – Powder to add volume and strength

These three components should be mixed in these proportions 1:2:4 (in weight) to get a plaster that can be laid with a trowel. With this three-component base you can create the standard finish "Stucco Veneziano".

A fourth component, a mixture of selected powders, can be added to this three-component base to create special floor finishes such as:

• TERRACOTTA: for a floor with the look of terracotta or "coccio pesto", ground roof tiles, a flooring typical of an antique Venetian tradition.

• MARBLE: for a floor with the look of stone slabs or natural-colored marble.

• QUARTZ SAND

## A2 - ADDITIVES

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The REINFORCED MICROCEMENT system was designed to be a simple, yet professional application which allows the plasterer to be creative. For this reason STUCCO ITALIANO has created a line of additives to achieve a variety of different effects, namely:

• MOTHER OF PEARL, an inert base of ground shells with a range of grain sizes. This enriches the floor with small reflective flecks of color, from white to beige/brown;

- GLITTER, reflective silver or gold flakes that create a shiny effect when the light hits it;
- MARBLE GRAINS, give the flooring a speckled web of color which is more pronounced on the smoothest surfaces

#### A3 - SEALERS

The REINFORCED MICROCEMENT System is completed with a surface treatment to make it waterproof and easy to clean; the recommended treatment is one that STUCCO ITALIANO has found works the best, but REINFORCED MICROCEMENT can also be treated with linseed oil, transparent epoxy or polyurethane coatings, acrylic varnish, and any other product that the plasterer has tested and prefers. These are our recommended treatments (alternative options) 1) SEALER, impregnating, nanotechnological waterproofing + PROTECTIVE WAX, a self-shining acrylic wax available on request in three different finishes: matte, satin and glossy.

2) PU1C, a water-based polyurethane varnish in one component

3) PU2C, a polyurethane varnish in two components

## **B - SUBSTRATE PREPARATION**

Before getting into the details of how to apply the product, we need to talk about the surfaces REINFORCED MICROCEMENT can be applied upon. A careful analysis of the substrate to be coated will ensure an excellent endresult. REINFORCED MICROCEMENT, is a water-based epoxy cement which provides excellent adhesion to all types of media and high resistance to detachment because it's a mix of two adhesive components, epoxy resin and cement. The epoxy resin guarantees adherence on all low-absorbent surfaces helping it to adhere to the substrate. The cement, besides giving strength to the material, binds all the inert components. Water distributes the binders and helps penetrate the pores.

The surfaces that can be covered are all those that have high tear/detachment- resistance (solid substrate), for this reason, we recommend applying REINFORCED MICROCEMENT exclusively on:

• New cement screeds; which must have completed its drying/curing process, which normally takes 3-4 weeks from application.

• Existing tiles; which must be well attached to the substrate.

If a surface is not suitable to apply this product on, it is best not to apply it since it will probably separate from the substrate after a few weeks. It is never advisable to apply a harder/stronger product on a weaker plaster. Even though REINFORCED MICROCEMENT can be walked on after 24-48 hours and is completely cured after 25-30 days, over this entire period there is internal movement and shrinkage that could compromise the job if done on a weaker substrate. For example, if this product is applied on a cement plaster which itself had been applied on top of gypsum or lime, after 2-3 weeks the hard/strong cement layer of the substrate will tear away from the weaker plaster beneath.

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## **B1 - ANALYSIS OF THE SUBSTRATE**

The first thing the plasterer must do is analyze and evaluate the substrate where REINFORCED MICROCEMENT will be applied to decide which application is best. It needs to be clarified at this point that REINFORCED MICROCEMENT is a coating for floors. It is not a flooring with an independent structure. Even though it is abrasion resistant and is highly resistant to compression, because it is only 1 to 2/3 mm thick, the substrate on which it is applied gives it its true compression strength. As already mentioned, REINFORCED MICROCEMENT adheres to all types of surfaces, but the force it exerts during the curing phase means that it can tear away some of the weaker subfloor, which detaches from the substrate below together with the RM.

Therefore, the materials that it can be applied on safely are:

- New cement screeds, that have completed the curing process
- Floor tiles (stoneware, single-fired, ceramic, marble or granite), which are well attached to the substrate below

It CANNOT be applied to:

Cement plasters which have gypsum or lime;

- Drywall;
- Old screeds;
- Self levelling plaster if we are not sure about its adherence to the screed;
- Any dusty substrate.

Be sure that the material on which you are applying the product is fully cured to ensure there will be no movement after applying REINFORCED MICROCEMENT.

## **B2 - EXPANSION JOINTS**

Usually on a surface up to 40-50  $m^2$  it is not necessary to create expansion joints. However, if there are cracks in the slab caused by constant movement of the structure, it is best to make expansion joints at those points.

## **B3 - IF THE SCREED/TILED SUBSTRATE HAS CRACKS**

On surfaces that have lots of fissures or cracks, use a fiberglass reinforcing mesh which will absorb any small movements instead of bringing them to the surface. The reinforcing mesh shouldn't cover any underlying joints since the movement at those points would be so strong that there would be a risk of separating the coating from the substrate. It is also advisable to use reinforcing mesh on tile floors where you can see cracks in the gaps between the tiles.

First, apply a narrow mesh (about 6 cm wide) along the crack, and fix it to the surface using a strong plaster like our GLP. Then, use 100 cm-wide mesh bands, placing them side by side without overlapping them, covering the whole floor. When you apply plaster over a tiled floor, you should pay particular attention to cracks. Sure enough, tiled floors often present cracks. Nevertheless, they are hardly noticeable, as the crack rarely breaks the marble or ceramic tile. Most often, the crack will follow the tiles running along their edges. Usually, the operator does not notice it until the work is finished, when the crack appears clearly over the plaster. The crack on the tiled floor is hardly noticeable, because it follows the edges of tiles and it hides in their gaps. For this reason, it is advisable to always apply a mesh on all tiled floors before applying a coating. We especially recommend it when you work on floors located above the ground floor, which, in a building, is the most stable one.

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If the floor surface is a new screed, you can fix the wide mesh bands to the floor with the first coat of REINFORCED MICROCEMENT. On the contrary, if the floor is covered by tiles or marble, you should first fix the mesh with a layer of highly fibrous and adhesive plaster, such as our Gap Levelling Plaster – GLP.

## **B4 - ABSORBTION DEGREE OF THE SUBSTRATE**

Another important factor when considering the substrate is its degree of absorption. As mentioned earlier, the REINFORCED MICROCEMENT mixture is in aqueous form and water transports the binders into the pores of the substrate. This guarantees a good grip on the substrate beyond the "suction" effect that using epoxy resin usually implies. So the porosity of the substrate is important and should be the right amount so that it doesn't absorb too little or too much.

If the substrate doesn't absorb enough, you can solve the problem by sanding over the entire surface with diamond coated sandpaper disc. This is especially recommended for tile floors or concrete slabs which have been finished too smoothly with a trowel or a polished marble floor. Sanding the substrate is recommended in any case to remove imperfections and dirt. The substrate should then be vacuumed to remove all dust and dirt.

If the surface is very absorbent or if it the temperature is so high that it could cause the water to evaporate too quickly, apply a primer to the sanded substrate.

For best results, it is important that the surface to be coated is perfectly flat and has no dips (or depressions) or unevenness. Sanding should be enough to smooth it out, but if not, apply two coats of REINFORCED MICROCEMENT loaded (filled) with German quartz. This should be sanded after hardening. After this step is complete, the normal REINFORCED MICROCEMENT application process can be done.

## **B5 - PRIMER AND REINFORCING MESH**

Normally REINFORCED MICROCEMENT doesn't need a primer since the first coat acts as like a primer, but as in those cases described previously where the surface is still slightly dusty (after careful cleaning) or you want to be sure the substrate doesn't absorb too much or you want to apply a fiberglass reinforcing mesh, you can apply the following REINFORCED MICROCEMENT mixture over the entire surface using a roller.

Mix together:

1 part comp. A

2 parts comp. B

2 parts comp. C

6-10 parts water

Apply this mixture over the entire surface, using a roller with long nap length. If you use reinforcing mesh, apply the mixture over the mesh to fix it to the surface. Wait 12-24 hours and apply one coat of the following REINFORCED MICROCEMENT mixture with a trowel:

1 part comp. A 2 parts comp. B

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4 parts di comp.C 2 parts spheroidal German quartz - grain size 0.3-0.1

1 parts water (approx.)

While it is still fresh, dust it with spheroidal German quartz 0.06-0.1 until the entire surface is covered. This helps to cover the mesh network.

The next day, sand the entire surface and remove all dust. If the mesh network is not visible and the surface is very smooth, you can begin the application cycle of REINFORCED MICROCEMENT. If the mesh is still visible, apply another coat as described above.

## **C - APPLICATION CYCLE**

We have shown how to prepare, when necessary, different surfaces for REINFORCED MICROCEMENT. Now we will describe the basic steps in the various application cycles to create the floor finish you desire. To understand how to get the best results, you need to understand about the curing process.

Water is added to the mixture to bind the mixture and make it workable. As the product cures, the water evaporates causing the volume of the material to decrease. This decrease happens over time depending on climatic conditions and the substrate, and although 70% of it happens in the first few days after application, the remaining 30% will happen during the following month. When a lot of material is used, it will decrease even more. So you have to be sure the substrate is completely smooth and flat. When you have uneven substrates, for example, one made of tiles with wide or deep gaps between them, it is important to prepare the substrate with inert material that will limit shrinkage, like our GLP (low-shrinkage adhesive plaster). Once this is done, the entire surface can be sanded to even it out and make it flat. On cement slabs that have been created specifically to lay REINFORCED MICROCEMENT on, this isn't necessary and therefore the basic cycle can be applied without any problems.

It is important to remember that the application of the first coat is very important since its 'design' or imprint will be visible in the finished REINFORCED MICROCEMENT.

## **C1 - STANDARD APPLICATION CYCLE**

This is the simplest and plainest application technique. You will only need the Base Kit without other additives or materials.

## **First Coat**

Following the color system, add color to component B, and then mix the ingredients together in the following proportions (parts are calculated in weight):

comp. A :	1 part
comp. B :	2 parts
comp. C :	4 parts
water:	about 70% of 1 part

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Once the components have been mixed together, they can be worked for about 20-30 minutes, after which they start hardening. So you must prepare the material little at a time.

Apply the product with a metal trowel being careful to leave a design you want to have in the final look. Be sure the surface is not too uneven. After 18-24 hours depending on atmospheric conditions, sand the surface using 60-grit sandpaper and vacuum well.

### Second coat

Following the color system, add color to component B, and mix the ingredients together in the following proportions:

comp. A:	1	part
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comp. B: 2 parts

comp. C: 4 parts

water: about 70% of 1 part

Apply the product with a metal trowel being careful to smooth out the material without leaving too many uneven areas. After 18-24 hours depending on atmospheric conditions, sand the surface using 80-grit sandpaper and vacuum up all the dust.

## Third coat (OPTIONAL)

Two coats can be sufficient, but a third coat can be applied too. Following the color system, add color to component B, and mix the ingredients together in the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	3 parts
water:	about 75% of 1 part

Apply the product with a plastic trowel or better with our No Marks titanium trowels (Bianko) being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using first 100-, then 120-grit sandpaper and vacuum up all the dust.

## D - COLORS

REINFORCED MICROCEMENT can be colored with water-based colorants. Stucco Italiano's COLOR SYSTEM gives instructions on how much colorant to mix into the product to obtain a homogeneous color.

It is very important to use the right colors since not all of those available on the market go well with REINFORCED MICROCEMENT; some may react negatively with REINFORCED MICROCEMENT to compromise the final strength of the product.

Usually when you want to obtain a gradated effect, in the last coat reduce the amount of color use in the previous coats by 70%.

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## **E - PROTECTIVE TREATMENT**

The final protective treatment for REINFORCED MICROCEMENT can be done with products each artisan is familiar with from linseed oil to acrylic wax. It is recommended to use a good waterproofing product and later treat it with acrylic wax that will make the dirt on the surface easier to clean.

STUCCO ITALIANO's recommended treatment is:

#### a) Sealer + PROTECTIVE WAX

• Our waterproofing SEALER as a base. This will limit the absorption of liquids. Apply two coats, wet on wet

• When the SEALER is dry, apply two or three coats of our PROTECTIVE WAX. The wax comes in two finishes: matt or glossy.

In areas of heavy traffic, the recommended treatment is:

#### B) PU1C or PU2C

- Apply two coats of PU1C, our single-component, water-based polyurethane varnish, transparent and matt. OR
- Apply two coats of PU2C, our two-component, water-based polyurethane varnish, transparent and matt.

## **F - COMPLEMENTARY PRODUCTS**

- 1. REINFORCED MICROCEMENT BASE KIT:
  - 1. comp. A epoxy resin
  - 2. comp. B hardener
  - 3. comp.C powder
- 2. Fine QUARTZ
- 3. Medium QUARTZ
  - 4. Coarse QUARTZ
  - 5. Fine TERRACOTTA Powders
  - 6. Coarse TERRACOTTA Powders
  - 7. Beige-White MARBLE
  - 8. Yellow MILLED MARBLE
  - 9. Gray MILLED MARBLE
  - 10. MOTHER-OF PEARL
  - 11. Silver GLITTER
  - 12. Gold GLITTER
  - 13. MICA
  - 14. SALT & PEPPER SAND
  - 15. EBANO POWDER
  - 16. PHOSPHORESCENT POWDERS
  - 17. SEALER
  - 18. Matt PROTECTIVE WAX

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- 19. Glossy PROTECTIVE WAX
- 20. PU1C
- 21. PU2C

## **G - ALTERNATIVE APPLICATION METHODS:**

### **G1 - BICOLOR STANDARD**

• LIGHT BICOLOR: the two basecoats are in one color, while the final coat that is applied with more loose and thin material) is done using only 30% of the colorant suggested in the color system. The trowel strokes are accentuated by the lighter shades of color in the final coat.

• DARK BICOLOR is the exact opposite. The two basecoats are in a color using only 30% of the colorant suggested, while the final coat (that is applied with more loose and thin material) has the full, more intense color. In this finish, the trowel strokes are very strong and defined.

### **G2 - "MARMORINO" MEDIUM**

This is the application procedure that will give the final surface a look with a more evident pattern enhanced by the quartz aggregate; the surface will be slightly rough or non-slip. If you want to achieve the look of marmorino, it is recommended that you apply a fourth coat as you did the third one. You will need the Base Kit without other additives or materials. There are three versions of this application.

• MONOCOLOR: all three coats are the same color and the final effect when backlit, shows the pattern of the trowel strokes;

LIGHT BICOLOR: the two basecoats are in one color, while the final coat is done using only 30% of the colorant suggested in the color system. The trowel strokes are accentuated by the lighter shades of color in the finish coat.
DARK BICOLOR is the exact opposite. The two basecoats are in a color using only 30% of the colorant suggested, while the final coat has the full, more intense color. In this finish, the trowel strokes are very strong and defined.

#### **Application Cycle**

#### First Coat:

Following the color system, add color to component B, and mix the ingredients together in the following proportions:

comp. A:1 partcomp. B:2 partscomp. C:4 partsquartz 0.1 -0.3: 2 parts

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#### water: a little less than 1 part

Apply the product with a metal trowel being careful to leave the design you want to have in the final look. Be sure there are not too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using 60-grit sandpaper and vacuum well.

#### Second coat:

Following the color system, add the same amount of color as you did in the first coat to component B, and mix the ingredients together in the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	4 parts
quartz 0.06-0.1:	2 parts
water:	a little less than 1 part

Apply the product with a metal trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using 80-grit sandpaper and vacuum up all the dust.

#### Third coat:

Following the color system, add the same amount of color for Monocolor or the correct percentage for the light or dark Bicolor and mix the ingredients together in the following proportions.

comp. A:	1 part
comp. B:	2 parts
comp. C:	3 parts

water: ..... a little less than 1 part

Apply the product with a metal trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using first 100-, then 120-grit sandpaper and vacuum well. If the surface seems to rough, apply a fourth coat as you did for the third one.

### **G3 - TERRACOTTA**

This is the application procedure that imitates antique "pastelloni", the traditional Venetian flooring made with lime. You will only need the Base Kit with the addition of the "TERRACOTTA" component available in "FINE" and "COARSE". There are two versions of this application:

TRADITIONAL, made with fine terracotta alone (i)

MARMORINO: in the first two coats both fine and coarse terracotta are added while in the final coat only fine terracotta is added (ii)

TERRACOTTA MARMORINO, Mother of Pearl can be added which enriches the surface with shiny, reflections. (iii)

#### i. TRADITIONAL TERRACOTTA Application cycle

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#### First coat:

Component B is colored with a yellow ochre/orange to give it the correct shade of terracotta. Then mix the ingredients together using the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	4 parts
TERRACOTTA FINE :	3 parts
water:	about as much as 1 part

Apply the product with a metal trowel being careful to leave the design you want to have in the final look. Be sure it is not too uneven. After 18-24 hours depending on atmospheric conditions, sand the surface using 60-grit sandpaper and vacuum up all the dust.

#### Second coat:

Add color to component B just as you did for the first coat and then mix the ingredients together using the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	4 parts
TERRACOTTA FINE :	3 parts
Water	about as much as 1 part

Apply the product with a metal trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using 80-grit sandpaper and vacuum up all the dust.

#### Third coat:

Add color to component B as you did for the first and second coats and mix the ingredients together in the following proportions:

comp. A :	1 parts
comp. B :	2 parts
comp. C :	2 parts
FINE TERRACOTTA:	3 parts
water:	little more than 1 part

Apply the product with the Bianko trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using first 100-, then 120-grit sandpaper and vacuum up all the dust.

#### ii. TERRACOTTA MARMORINO application cycle

First coat:

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Component B is colored with a yellow ochre/orange to give it the correct shade of terracotta. Then mix the ingredients together using the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	4 parts
COARSE TERRACOTTA:	2 parts
FINE TERRACOTTA:	2 parts
water:	about 1 part

Apply the product with a plastic trowel being careful to leave a design you want to have in the final look. Be sure it is not too uneven. After 18-24 hours depending on atmospheric conditions, sand the surface using 60-grit sandpaper and vacuum up all the dust.

#### Second coat:

Add color to component B just as you did for the first coat and mix the ingredients together in the following proportions:

comp. A:		1 part
comp. B:		2 parts
comp. C:		4 parts
COARSE TERR	ACOTTA:	2 parts
FINE TERRACO	DTTA:	2 parts
water:	about 1	part

Apply the product with a metal trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using 80-grit sandpaper and vacuum well.

#### Third coat:

Add color to component B just as you did for the first and second coats and mix the ingredients together in the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	2 parts
FINE TERRACOTTA:	2 parts
water:	about 1. part

Apply the product with the Bianko trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using first 100-, then 120-grit sandpaper and vacuum up all the dust.

In this application, it's important the amount of fine terracotta used is always the same in each coat since it will affect the final color of the product.

#### iii. TERRACOTTA MARMORINO WITH MOTHER OF PEARL - application cycle:

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This is the same application procedure as that for TERRACOTTA MARMORINO, with the addition of Mother of Pearl to the first and second mixtures. You can add 10-20% of the amount of coarse terracotta used depending on the desired effect.

### **G4 - MARBLEIZED**

In this flooring, inert marble and rock are added. This gives the effect of split stone and brings out the granules of the inert material. The beauty of this product comes from the fact that it doesn't come from adding color, but from the inert marble and rock used.

In marbleized flooring, inert ingredients such as mica, mother of pearl, or marble are added. Besides creating a smooth surface with the pattern of the trowel strokes, it can be worked with special tools to create a scratched two-tone look.

#### MARBLEIZED – Application Cycle

#### First Coat:

Component B is colored with a yellow ochre/orange to give it the correct shade of terracotta. Then the ingredients are mixed together in the following proportions:

comp. A:1 partcomp. B:2 partscomp. C:4 partsINERT MARBLE: 2 parts

water: about 1. part

Apply the product with a metal trowel being careful to leave the design you want to have in the final look. Be sure it is not too uneven. After 18-24 hours depending on atmospheric conditions, sand the surface using 60-grit sandpaper and vacuum up all the dust.

#### Second coat:

Add color to component B as you did for the first coat and mix the ingredients together in the following proportions:

comp. A:1 partcomp.B :2 partscomp.C :4 partsINERT MARBLE: 2 partswater:about 1 part

Apply the product with a metal trowel being careful to smooth out the material without leaving too many uneven areas. In this phase, the empty spaces on the surface of the first coat tend to get filled in. After 18-24 hours depending on atmospheric conditions, sand the surface using 80-grit sandpaper and vacuum up all the dust.

#### Third coat:

Add color to component B as you did before and mix the ingredients together in the following proportions:

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comp. A:1 partcomp. B:2 partscomp. C:2 partsINERT MARBLE: 2 partswater:about 1 part

Apply the product with a Bianko trowel being careful to smooth out the material without leaving too many uneven areas. Every once in a while remove the material from the trowel when it becomes too full of the inert marble, and replace it with new material. After 12-24 hours depending on atmospheric conditions, sand the surface using first 100-, then 120-grit sandpaper and vacuum well.

## G5 - TERRACOTTA MARMORINO SCRATCHED

#### **Application cycle:**

#### First coat:

Mix the ingredients together in the following proportions:

comp. A:1 partcomp. B:2 parscomp. C:4 partsINERT MARBLE: 2 parts

Water: a little less than 1 part

Apply the product with a metal trowel being careful to smooth out the material so that the thickness is even across the surface; on fresh material use the special tool to scratch the surface to leave some grooves. After 18-24 hours, depending on atmospheric conditions, sand the surface using 60-grit sandpaper or better yet use a carbide grinder. Then vacuum thoroughly.

#### Second coat:

Add color to lighten or darken the mixture depending on the final effect desired, and then mix the ingredients together in the following proportions:

comp. A:1 partcomp. B:2 partscomp. C:4 partsINERT MARBLE: 2 partswater:about 1 part

Apply the product with a metal trowel being careful to fill in the empty spaces left in the first coat, being careful to smooth out the material without leaving too many uneven spots. After 18-24 hours depending on atmospheric conditions, sand the surface using 60- 80-grit sandpaper and vacuum up all the dust.

#### Third coat:

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Add color as you did in the second coat and mix the ingredients together in the following proportions:

comp. A: 1 part comp. B: 2 parts comp. C: 2 parts FINE TERRACOTTA : 2 parts water: about 1 part

Apply the product with a Bianko trowel being careful to fill in all the empty spaces and make the surface as smooth as possible. After 12-24 hours depending on atmospheric conditions, sand the surface using first 100-, then 120-grit sandpaper and vacuum up all the dust.

### G6 - SPONGED

To understand how versatile REINFORCED MICROCEMENT is and how many ways it can be applied, the following application process will be described to achieve a variety of artistic results. The number of different results are only limited by the artisan's imagination.

Once the entire cycle of monocolor MARMORINO FINE has been applied, a design can be created on the dry, smooth surface using a sponge, brush, rag or any other tool that you are used to using colored REINFORCED MICROCEMENT diluted with abundant water.

### Application cycle

#### First Coat:

Following the color system, add color to component B, and then mix the ingredients together in the following proportions:

comp. A :	1 part
comp. B :	2 parts

comp. C : 4 parts

water a little less than 1 part

Apply the product with a metal trowel being careful to leave a design you want to have in the final look. Be sure it is not too uneven. After 18-24 hours depending on atmospheric conditions, sand the surface using 60-grit sandpaper and vacuum up all the dust.

#### Second coat:

Following the color system, add color to component B, and then mix the ingredients together in the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	4 parts
water	a little less than 1 part

Apply the product with a metal trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using 80-grit sandpaper and vacuum up all the dust.

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#### Third coat:

Following the color system, add the same amount of color for or reduce or increase the color to achieve the effect you want and then mix the ingredients together in the following proportions:

comp. A:	1 part
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comp. B: 2 parts	rts	2 pai	3:	comp.
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comp. C: 3 parts

water a little less than 1 part

Apply the product with the Bianko trowel being careful to smooth out the material without leaving too many uneven areas. After 12-24 hours depending on atmospheric conditions, sand the surface using first 100-, then 120-grit sandpaper and vacuum up all the dust.

#### Finishing:

Prepare some containers of REINFORCED MICROCEMENT with different colors mixed in the following proportions:

comp. A:	1 part
comp. B:	2 parts
comp. C:	2-3 parts
water:	3-4 parts

With a natural sponge or other tool, dab on alternating colors, overlapping edges of color until the entire surface is covered in the desired design. After 12-24 hours lightly sand the surface with 180/200 grit or finer sandpaper.

Other application methods are possible, by adding other additives (such as glitters, "salt and pepper" sand, ebano powder, phosphorescent powders) or by changing application method (with roller, crevassed eccetera).

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We have drawn up the material presented above to the best of our technical and experiential knowledge. Nevertheless, our suggestions and recommendations are not guaranteed. All responsibility for the obtained results lies solely with the method and conditions adopted for the application of the product. Such indications constitute valid support for verifying the product's suitability for the specific case. We reserve the right to make modifications to the present information without previous warning.

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