

## APPLICATION ON CONCRETE TILES AND SCREED

Issued on 07/07/2015 - Rev. n. 1 of 21.10.2021

### PRIMER BETON KA+KB

#### Preparation of the Beton KA + KB primer

The package consists of 2 pieces, Beton KA of 12 kg in powder and Beton KB It 5 liquid, pour 3.5 / 4 liters of Beton KB into a clean bucket, add Beton KA in small doses and mix thoroughly for about five minutes using a mechanical mixer, the primer is now ready to be applied. In the case of colored floors or walls, it is advisable to color the primer as well. The yield of the primer is about 10 square meters a single layer, and has a pot-life of about 3 hours from the mix.

#### Application on tiles

On a floor or wall with old tiles it is advisable to make sure that they are well anchored and free from oils and greases, proceed with the application of the single-layer primer using a 3mm stainless steel trowel, apply the primer for about 1 square meter and immediately after smooth the treated surface with the smooth side of the trowel in order to level the product and make it uniform, continue with the same procedure for the entire surface.

#### Application on existing screed

On an existing screed floor or covering that has been cured for at least 28 days, it is advisable to make sure that there are no cracks, proceed with the application of the single-layer primer using a 3mm stainless steel trowel, apply the primer for about 1 square meter and immediately after smoothing the treated surface with the smooth side of the trowel in order to level the product and make it uniform, continue with the same procedure for the entire surface.

#### Application on tiles with traces and restorations

On a floor or wall with old tiles where there are traces and previously restored grooves for the passage of water pipes, for heating, etc ... proceed with the laying of a 70/80 gr fiberglass mesh over the entire surface treat, pour the primer on the mesh and spread it evenly over the entire surface using a stainless steel trowel, continue with the same procedure for the entire surface. **It is recommended to mix Beton KA with 4 liters of Beton KB only for coverings.**

#### Preparation of the 3D Cement

The package consists of 20 kg of 3D Cement in powder, pour 5/6 liters of drinking water into a clean bucket and pour the dye, mix everything so as to dissolve the dye itself, add the 3D Cement in small doses and mix thoroughly for about five minutes using a mechanical mixer until a homogeneous and lump-free paste is obtained, the 3D Cement is now ready to be applied. The yield of 3D Cement is about 16 square meters in two layers (troweled effect), and has a pot-life of about 6 hours from the mix.

#### Application method of 3D cement

Using a stainless steel trowel or a plastic trowel, spread a first layer of Cemento 3D evenly over the entire surface, taking care to smooth the product well so as not to leave imperfections or joints. After 24h and before starting the laying of the 3D Cement it is advisable to check that there are no lumps or impurities on the surface, in this case proceed to clean the entire surface using a vacuum cleaner. Taking some precautions before and during the application of 3D Cement is of considerable importance, for example, shoes must be protected with special protections, do not drag the bucket or smoke during installation, if these simple precautions are not observed there is a risk of compromise the result of the work. Proceed to mix the 3D Cement as before and apply a second layer for about 1 square meter and immediately after smoothing the treated surface so as to make it smooth and flat, continue with the same procedure for the entire surface, once the work is finished let it dry for at least 24h.

## Preparation of the Decor Finish

Decor Finish is ready to use, do not add water or dyes. After shaking the product well, pour it into a clean bucket, the yield of Decor Finish is about 12 square meters in two layers.

## Application method of Decor Finish

For the correct application of the Decor Finish it is essential to use a Mohair roller with short hair;

Proceed with the spreading of the first layer of Decor Finish evenly over the entire surface, taking care to spread the product well and go over it several times until completely absorbed, the application must be done following cross movements and no excess product should be left, in this way we will obtain a compact and uniform surface (the first layer of Decor Finish has a primary role for the perfect result of the work and for the permeability to water), let the product dry for at least 12 hours;

Check that there are no lumps or impurities on the surface, in this case proceed with cleaning using a vacuum cleaner. (it is essential that the surface is perfectly clean before proceeding with the second layer), spread a second layer of Decor Finish evenly over the entire surface, taking care to distribute the product well and go over it several times and not to leave the product in excess;

The drying times for each layer are significantly influenced by the temperature and ventilation during drying and may make it necessary to extend the drying times themselves, in case of insufficient compliance with the drying times, the applied product could wrinkle, crack, form strips or lift off the holder.

## IMPORTANT NOTE

Drying time to walk on it and use water after applying the last coat of Decor Finish is 7/10 days, the times can be lengthened according to the environmental humidity and the seasonal period of application (seven days at 30 ° C, ten days at 10 ° C, apply at least 4 ° C above the dew point);

Do not cover the surface during the seven days of curing, do not place heavy objects such as furniture, sofas, tables, pots with plants, etc. on top, during drying favor the exchange of air. In the case of outdoor application on 3D Cement floors, the optimal slope of the treated surface must be taken into account so as to allow the water to flow out so as not to create long-term stagnation;

Decor Finish decorates and protects continuous surfaces but does not make them indestructible and eternal. Do not apply the product in case of counterthrust humidity, the duration over time depends mainly on the thickness applied and the type and intensity of wear to which the substrate is subjected. To maintain the pleasant appearance, we recommend regular cleaning and care of the surface.

## KNOWLEDGE OF PRODUCTS

Even if our application cycle includes only one anchoring primer, it is also true that in front of some types of substrates such as screeds, parquet, wood, etc., ground-floor dwellings, substrates subject to rising damp, etc. have the optimal knowledge to be able to create a solid and effective structure that lasts over time. The Primer is the fundamental basis of the entire application process.

## MIXTURE, COLORS AND PERFECT LAYOUT

It is always assumed that the pigments, coloring pastes or toners used to color the products are the same. Behind each color proposed by the manufacturer there are various studies and very strict laboratory tests and it is precisely for this reason that it is necessary to know first of all the mixing of the dyes and that of the product itself.

## PERFECT SUCCESS OF WORK

One of the main factors for the success of a floor is NOT to be superficial in the evaluation of the laying surfaces that jeopardize the success of a continuous surface, the drafting, application times and cleaning of the environments is essential for the perfect success of a 3D concrete floor or wall covering.

## **MAINTENANCE**

Let's start by saying that any type of surface is not eternal! There are some initial precautions that can be very useful in maintaining a continuous 3D Concrete surface in good condition:

Provide a doormat at the entrance to the house that can retain dust, sands and abrasive particles. Use the broom or vacuum cleaner regularly. Use felt protectors under furniture, especially under those that move often such as chairs. If it is necessary to move heavy furniture, it is advisable to place woolen cloths under the feet or the base of the furniture to avoid unsightly scratches. Cleaning the continuous 3D Cement surfaces is very simple; it is sufficient to wipe a cloth moistened with water and alcohol on the surface to be cleaned. Even if the transparent or colored finishing treatment protects the floor from the rapid penetration of accidentally fallen liquids, it is good to remember that all liquid substances, especially those most used in the home environment, must be removed quickly before they can create unsightly halos. For extraordinary maintenance and repairs, the intervention of specialized personnel is essential.

## **What is Beton?**

It is a two-component powder primer for interiors and exteriors, with high adhesion, fiber-reinforced, transpiring, white in color. Beton KA + KB is a mortar based on carbonate aggregates and quartz sands with controlled grain size, powdered polymeric binders, specific additives and short synthetic fibers. The simultaneous presence of mineral and polymeric binders, inorganic fillers and reinforcing fibers develops a positive synergy that increases the mechanical properties of the product.

## **What is 3D Cement?**

is a new generation structured nanocement, premixed powder composed of selected quartz sands and marble powders, minerals and special additives that allow excellent adhesion on all normal substrates. The complete cycle of 3D Cement is certified. Ideal for those who do not like joints because it allows the creation of continuous surfaces without joints. Its extraordinary characteristics make it ideal for both horizontal and vertical surfaces, ideal for decorating bathrooms, shower stalls, tables and kitchen tops, to give space to your ideas without interruptions and in just three millimeters thick, easy to clean and fast to realize. It is suitable for application on heated floors.

## **What is the Decor Finish?**

is a water-based nanostructured transparent polyacrylic paint, one-component of the latest generation, in three finishing versions, semi-gloss, opaque and non-slip, Decor Finish is waterproof and drive-over, anti-dust, easily washable, resists abrasion, resistant to pedestrian traffic, consolidating, free from organic solvents, applicable in closed environments, odorless, resists thermal changes, requires minimal maintenance even after years, formulated with low environmental impact.

## **TECHNICAL SHEET BETON KA + KB**

### **TECHNICAL DATA:**

Appearance: Powder;

White color;

Solid residue: 100%;

Grain size G.F.: Max 0.5 mm;

Mineralogical nature of the aggregate: Silicon/carbonate;

Consistency: Thixotropic;

Density of the mix: 1500 Kg / m<sup>3</sup>;

Duration of the mix: About 3 hours depending on the period and relative humidity;

Waiting time before finishing Cemento 3D: Min. 24 hours;

Coverage: ~ 10 m<sup>2</sup> with a thickness of about 3 mm a single coat, using the glass fiber mesh greater than 70/80 gr/m<sup>2</sup> the yield can be reduced by up to 30%;

Packaging: Comp. KA of Kg. 12 + Comp. KB of It 5

Storage in well-closed original packaging and a dry place between +5°C and +30°C.

## CARATTERISTICHE DI MESSA IN OPERA:

Temperatura d'utilizzo: +5 +35 °C;

Applicazione consigliata per interni ed esterni;

Applicare su supporti ben asciutti e puliti; Coprire bene infissi, porte, etc.;

Non applicare su supporti bagnati, gelati o su ripristini ancora umidi;

Conservare in luogo fresco, asciutto ed al riparo dal sole;

Non applicare in presenza di sole battente, forte vento o pioggia;

Nel caso di superfici troppo calde per l'effetto dei raggi solari è opportuno inumidirle con acqua;

Attendere la stagionatura della rasatura cementizia prima della decorazione;

È importante che durante l'applicazione e nelle 24 ore successive la temperatura non scenda sotto +5°C e l'umidità relativa non sia superiore all'80%;

## TECHNICAL SHEET CEMENTO 3D

### Technical data:

Appearance: Powder

Color: White or colorable with Toner and/or our [Color tinting system 3.0](#)

Dilution: 5/6 liters of drinking water according to the type of processing chosen

Coverage: 16 m<sup>2</sup> in two coats (spatula effect)

Dough pH: 12-14

Workable mix duration: (\*) 6 hours

Apparent density: 1.20 kg / L

Apparent density of the dough: 1.45 kg / L

Application temperature: + 5 ° C ÷ + 35 ° C

Drying time of the first layer: 24 hours

Drying time of the second layer: 24 hours

Drying time for applying Decor Finish and / or VL3D Liquid glass: 48 hours

Slip: Method DIN 51097 Class A 12 ° ≤ a <18 ° - Non-slip (DIN 51130): R11

Thermal resistance - Operating temperature: -30 ° C ÷ + 90 ° C

Fire reaction Euroclass: (EN 13501) Class A1

Storage in well-closed original packaging and in a dry place between + 5 ° C and + 30 ° C.

Packaging: 20 kg and 4 kg buckets

Test conditions: temperature 23 ± 2 ° C, 50 ± 5% U.R. and air speed in the test area <0.2 m / s. The data expressed may vary according to specific site conditions: temperature, humidity, ventilation, absorbency of the bottom.

(\*) The times expressed are longer or shorter with a decrease or increase in temperature. In accordance with the general principles - Principles of evaluation of the use of products and systems.

## TECHNICAL SHEET DECOR FINISH

### Technical data:

Practical coverage: 10/12 m<sup>2</sup> per Lt 2.5 with two coats, variable according to the roughness and absorption of the substrate.

Specific gravity 1.0 ± 0.05 at 20 ° C.

Color: Transparent whitish for the semi-gloss version, transparent straw-yellow for the opaque version.

Temperature resistance: Operating temperature up to 70 ° C

Storage in well-closed original packaging and a dry place between + 5 ° C and + 30 ° C.

Slip: Method DIN 51097 Class A 12 ° ≤ α < 18 ° - Non-slip (DIN 51130): R11 (Decor Finish AS)

Packaging: Lt 2,5 and Lt 0,750

### Safety (for EEC regulations) and symbols:

The product is not flammable or dangerous, the product does not require labeling pursuant to Legislative Decree N ° 65 of 14/03/2003 and subsequent amendments and updates.

### VOC classification: (D.L. 27 March 2006 n ° 161):

High performance one-component paints. EU VOC limit value for DECOR FINISH AS (cat.i / BA): 140 g / L. DECOR FINISH AS contains max 140 g / L of VOC.

### Storage and Transport:

In original well-closed packaging and a dry place between + 5 ° C and + 30 ° C., Land transport ADR / RID not subject.

### Safety (EC Regulation criteria 1272/2008 (CLP)):

The product is not considered dangerous. Precautionary statements: Not subject

Risk phrases: not subject

Symbols: Not subject

The product is not considered dangerous according to EC Regulation 1272/2008 (CLP). Special Provisions: EUH 210 Safety data sheet available on request. Clean packaging is 100% recyclable. For information on the correct disposal, storage and handling of the product, please consult the relevant Safety Data Sheet.

### OTHER NOTES:

- *The data contained may vary at any time without prior notice by Nikkolor Italia.*
- *The use of coloring pastes not supplied by Nikkolor Italia can compromise not only the aesthetic appearance but above all can significantly alter the performance of the product itself.*
- *The information contained in these technical data sheets are the result of our best knowledge and, as such, are disclosed for information purposes; therefore, it does not engage the responsibility of our company in respect of any complaints arising from conditions of use that are beyond our control, whoever intends to use it is required to establish whether the product is suitable for use or not.*
- *Our The guarantee obligation is therefore limited to the quality and constancy of the same in relation to the finished product, and exclusively for the above data.*
- **For more detailed information please contact our TECHNICAL ASSISTANCE service.**

\*Dal 1° gennaio 2016 in Italia la formaldeide è stata catalogata come cancerogena. Lo IARC (International Agency for Research on Cancer) classifica queste sostanze in base a quanto siano dannose per l'essere umano.

\*APEO-free indica la caratteristica di un prodotto esente da APEO (alchilfenolo etossilato), sostanza pericolosa per l'ambiente e gli organismi acquatici. Il regolamento REACH (Regolamenti EC 552/2009 EC 1907/2006 REACH), proibisce in Europa l'uso di APEO in concentrazioni uguali o maggiori di 1.000 ppm (parti per milione).









Laboratorio Tecnologico  
della Tecnoprove s.r.l.

Autorizzato con Decreto Ministero LL.PP. n. 25749 del 5.8.1985 ai sensi art. 20 L. 1096/71  
Iscritto all'Albo dei Laboratori autorizzati per la Ricerca Scientifica e Tecnologica con D.M. del 23.11.88  
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Capitale Sociale 28.000 EURO

Ostuni, 09.12.2019

<b>TEST REPORT</b>	<b>ML032/19</b>
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<b>Ref. Entry report</b>	<b>n. 503 of 25.10.2019</b>
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<b>CLIENT</b>	<b>Company NIKKOLOR ITALIA s.r.l. Viale Vittorio Veneto, 186 96014 Floridia (SR) Italy</b>
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<b>SUBJECT OF THE TESTS</b>	<p>a) Test methods for screed materials - Part 2: Determination of the flexural and compressive strength. UNI EN 13892-2</p> <p>b) Test methods for screed materials - Part 8: Determination of the bond strength. UNI EN 13892-8</p> <p>c) Rapid deformation tests (impact resistance) - Part 1: Test with falling mass with large surface punch. UNI EN ISO 6272-1</p> <p>d) Paint products and systems for external masonry and concrete - Determination and classification of the degree of transmission of liquid water (permeability). UNI EN 1062-3</p>
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<b>TYPE SAMPLE DECLARED BY THE CUSTOMER:</b>	<p>Continuous coating system for floors and walls. Composed of three products: - BETON KA + KB (primer) - CEMENTO 3D (finish) - DECOR FINISH (transparent paint)</p>
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<b>DELIVERY DATE OF SAMPLES</b>	<b>11.11.2019</b>
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<b>DATE OF END OF TESTS</b>	<b>05.12.2019</b>
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(this test report consists of 5 pages)





## TEST RESULTS

### TEST METHODS OF SCREED MATERIALS - PART 2: DETERMINATION OF THE STRENGTH TO FLEXION AND COMPRESSION.

(UNI EN 13892-2)

Laboratory temperature	21 °C
Relative humidity of the laboratory	65 %
Tests carried out on the sample	CEMENTO 3D
Specimen dimensions	40x40x160 mm

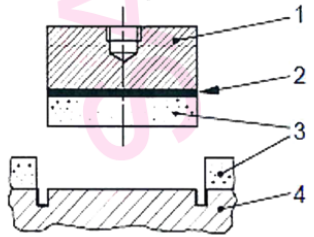
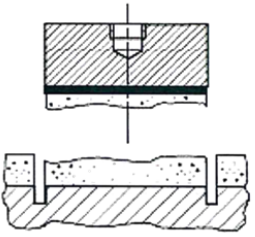
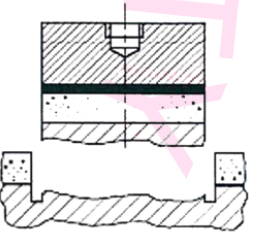
Audition	Flexural strength		Compressive strength	
	Load maximum ( $F_f$ ) [N]	Resistance ( $R_f$ ) [N/mm <sup>2</sup> ]	Load maximum ( $F_c$ ) [N]	Resistance ( $R_c$ ) [N/mm <sup>2</sup> ]
1	248,3	5,82	2847,0	17,79
			2891,0	18,07
2	250,4	5,87	2826,0	17,66
			2951,0	18,44
3	225,4	5,28	2762,0	17,26
			3009,0	18,81
Average	241,4	5,66	2881,0	18,01

## METHOD OF TESTING SCREED MATERIALS - PART 8: DETERMINATION OF THE ADHESION FORCE.

(UNI EN 13892-8)

Laboratory temperature	21 °C
Relative humidity of the laboratory	65 %
Tests carried out on the application system in the following way:	1st coat: BETON KA + KB (primer) 1 layer 2nd coat after 24 hours: 3D CEMENT (2-layer finish) 3rd coat after 28 hours: DECOR FINISH (transparent paint) 3 layers
Specimen size	50x50 mm

Audition n °	Test area (mm <sup>2</sup> )	Force applied (N)	Resistance to adhesion (Mpa)	Type of posting
1	2501,0	2546	1,02	50%X/Y - 50%Y
2	2500,0	2265	0,91	100%X/Y
3	2501,0	2162	0,86	100%X/Y
4	2498,0	2766	1,11	80%X/Y - 20%Y
5	2500,0	2933	1,17	50%X/Y - 50%Y
<b>Average</b>	2500,0	2534	<b>1,01</b>	

Type of fracture X/Y	Type of fracture Y	Type of fracture X
Cohesion Fracture - Fracture at the interface between the multilayer system and the support. The test value is equal to the bond strength	Cohesion Fracture - Fracture within the multilayer system itself. The bond strength is greater than the test value	Cohesion fracture - Fracture of the support. The bond strength is greater than the test value
		
<p>Legend 1 Extraction plates; 2 Layer of adhesive; 3 Multilayer system; 4 Concrete substrate</p>		

## RAPID DEFORMATION TESTS (IMPACT RESISTANCE) - PART 1: TEST WITH FALLING MASS WITH LARGE SURFACE PUNCH.

(UNI EN ISO 6272-1)

Laboratory temperature	21 °C
Relative humidity of the laboratory	65 %
Tests carried out on the application system in the following way:	1st coat: BETON KA + KB (primer) 1 layer 2nd coat after 24 hours: 3D CEMENT (2-layer finish) 3rd coat after 28 hours: DECOR FINISH (transparent paint) 3 layers
Specimen size	300x300 mm

	Load	1,02353 kg
Height (m)	Nm	
0,025	0,25	
0,050	0,50	
0,075	0,75	
0,100	1,00	
0,125	1,26	
0,150	1,51	
0,175	1,76	
0,200	2,01	
0,225	2,26	
0,250	2,51	
0,275	2,76	
0,300	3,01 <sup>(1)</sup>	
<sup>(1)</sup> Failure of the specimen surface		

### PAINTS AND VARNISHES - PRODUCTS AND SYSTEMS FOR PAINTING EXTERNAL WALLS AND CONCRETE. DETERMINATION AND CLASSIFICATION OF THE DEGREE OF TRANSMISSION OF LIQUID WATER (PERMEABILITY)

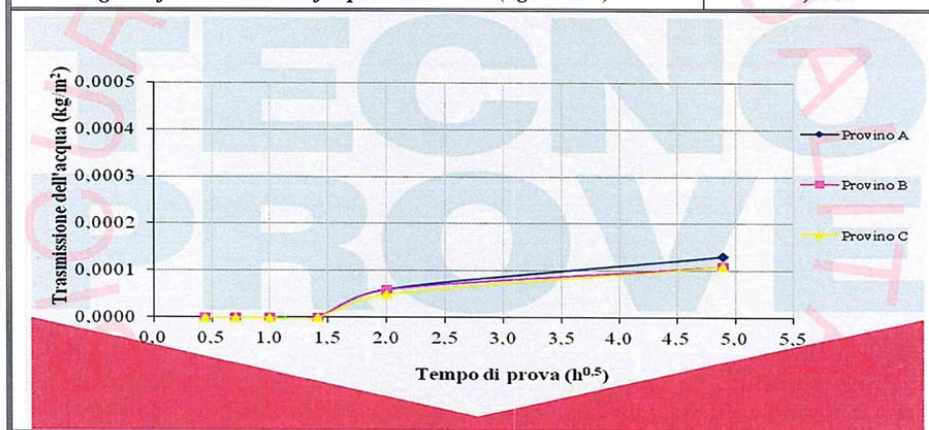
(UNI EN 1062-3)

Laboratory temperature	21 °C
Relative humidity of the laboratory	65 %
Tests carried out on the application system in the following way:	1st coat: BETON KA + KB (primer) 1 layer 2nd coat after 24 hours: 3D CEMENT (2-layer finish) 3rd coat after 28 hours: DECOR FINISH (transparent paint) 3 layers
Specimen size	Area 240 cm <sup>2</sup> Overall height between multilayer system and support: 2,8 mm

Audition	h <sup>0,5</sup>	h <sup>0,5</sup>	h <sup>0,5</sup>	h <sup>0,5</sup>	h <sup>0,5</sup>	h <sup>0,5</sup>
	0,2 h	0,5 h	1 h	2 h	4 h	24 h
	0,45	0,71	1,00	1,41	2,00	4,90
	kg/m <sup>2</sup>	kg/m <sup>2</sup>	kg/m <sup>2</sup>	kg/m <sup>2</sup>	kg/m <sup>2</sup>	kg/m <sup>2</sup>
1	0,0000	0,0000	0,0000	0,0000	0,0001	0,0001
2	0,0000	0,0000	0,0000	0,0000	0,0001	0,0001
3	0,0000	0,0000	0,0000	0,0000	0,0001	0,0001
Average	0,0000	0,0000	0,0000	0,0000	0,0001	0,0001

Degree of transmission of liquid water "w" (kg/m<sup>2</sup>\*h<sup>0,5</sup>)

0,0001



Il Tecnico Sperimentatore  
(Vincenzo Parisi)

La Direzione del Laboratorio  
(dott. ing. Salvatore Molentino)



Pagina 5 di 5 del Rapporto di Prova ML 032/19 del 09.12.2019

È vietata la riproduzione del rapporto di prova o di singole parti senza l'approvazione del laboratorio Tecnoprove s.r.l.