



VIMEPOX SP-COAT®

Two-component, high-strength coloured epoxy coating – suitable for swimming pools

Properties

VIMEPOX SP-COAT is a two-component, solvent based, coloured epoxy system.

VIMEPOX SP-COAT offers:

- High bonding to cementitious and metal surfaces after hardening.
- High mechanical strengths: hardness combined with relative elasticity and abrasion strength.
- Waterproofing and chemical resistance to acids, alkalis, solvents, fuels, oils, seawater and detergents.
- Durability and weather resistance.

Applications

Its high mechanical and chemical strengths make **VIMEPOX SP-COAT** particularly suitable for painting swimming pools.

Generally, **VIMEPOX SP-COAT** is applied as a protective coat and decorative paint to cementitious substrates, such as concrete, cement mortar, plaster, asbestos cement and iron and steel surfaces, both horizontal and vertical.

VIMEPOX SP-COAT is a sealing coat (paint) and coated layer <1mm (multiple paint), in accordance with DIN 28052 – 1 and therefore for medium mechanical stressing (category 2) up to $1 \text{ N/mm}^2 = 100 \text{ t/m}^2$ (static charges and vehicles with inflatable tyres)

In addition to high resistance to chemicals (see corresponding table overleaf), **VIMEPOX SP-COAT** is not toxic and does not allow migration of harmful substances into foodstuff: it is suitable for floors, walls and any food production and packaging areas in general.*

* Certificate of conformity for **VIMEPOX SP-COAT** regarding sealing coatings for concrete and metal in food production and processing areas issued by ISEGA, the German Research & Testing Organization

VIMATEC - N. VIDALIS S.A.
CONSTRUCTION CHEMICALS TECHNOLOGIES



Head: 1-3, Makedonias str, GR-546 41 Thessaloniki GREECE
Tel: +30-2310 858561, +30-2310 843093 Fax: +30-2310843566
Branch: 8, Narkissou str, GR-136 72 Acharnes Attiki GREECE
Tel: +30-210 2828435 Fax: +30-210 2829434
e-mail: info@vimatec.gr
> www.vimatec.gr <



In addition to swimming pools, **VIMEPOX SP-COAT** is therefore also ideal for floor coatings and wall painting in warehouses and production areas, chemical plants, car stations, gas stations and also for anti-corrosion protection of metal constructions.

Technical Data

In accordance with the report issued by the Institute of Constructions and Construction Materials Technology, University of Karlsruhe (TH)

Composition	Two component epoxy system
Component A	Colored solvent based epoxy resin
Component B	Clear solvent based hardener
Admixture ratio	A:B = 5:1 by weight
Specific gravity of mixture (A+B)	1.4 kg/l
DIN EN ISO 2811-1	
Pot life	
	at 20° C > 2 hours
	at 30° C > 1 hour
Minimum hardening temperature	+ 8° C
Foot traffic:	After 24 hours at 20° C
Final hardening time	
	at 20° C 7 days
	at 30° C 6 days
Adhesion strength (bonding)	
to concrete substrate	3.5 N/mm ² – concrete cohesion break
(DIN EN ISO 1542)	
Abrasion resistance (wear) in accordance	
with the Taber method	37 mg after 500 cycles
(DIN EN ISO 7784-2)	75 mg after 1000 cycles
Water absorbability	
(DIN EN ISO 62)	1.1% after 12-day immersion

How to use VIMEPOX SP-COAT

1. Substrate

The substrate must be sound, dry, and clear of dust, rust, oil or any dirt in general that may prevent bonding of the epoxy coating.

Therefore substrate should be prepared by sand blasting, water jetting, shot blasting, and then scrubbing – polishing with a mosaic machine.



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Removing the dust with a high-absorption, industrial vacuum cleaner completes substrate preparation.

More specifically, cementitious substrates must meet the following fundamental criteria:

- Surface adhesion strength $\geq 1.5 \text{ N/mm}^2$
- Moisture $\leq 4\%$

These requirements need:

- Concrete strength category: at least C 20/25
- Cement mortar quality: content in cement $\geq 350 \text{ kg/m}^3$
- Age of concrete and cement mortar > 28 days
- Epoxy coating must be protected against moisture, and mainly against water vapors that may attack it from behind, causing detachment. Provisions must be made to prevent such possibility by using the respective vapor barrier.

2. Priming

After the preparation and prior to application of **VIMEPOX SP-COAT**, the porous cementitious substrates must be primed with the clear epoxy primer **VIMEPOX PRIMER-S** or **VIMEPOX SP-COAT**, diluted with up to 10% **VIMEPOX SOLVENT**.

Priming will seal surface pores and create a uniform, closed surface, stabilizing at the same time any undesirable dust remains.

Moreover, substrate impregnation with the epoxy material will:

- Improve surface strengths
- Seal capillary pores and solve the problem of small deviations from the permissible moisture levels

In the above cases, in order to get the desirable results in the maximum depth, the special low-viscosity material **VIMEPOX BETON-IMP** can be used for impregnation. Otherwise **VIMEPOX PRIMER-S** must be diluted with up to 15% **VIMEPOX SOLVENT**.

! Caution: if the substrate is highly absorbent, impregnation priming must be repeated until the surface is sealed.

3. Mixing

Components A (resin) and B (hardener) are packaged in different vessels and in the required ratio. This means that weighing is not necessary before mixture, unless less quantity is needed than the one contained in the packs.

Before mixing the two components, it is better to mix/homogenize the coloured component A. The two components should be mixed in a different and clean mixing vessel, where the content of packs A and B will be emptied.



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Use a slow-rotating drilling machine (up to 300 rounds/minute). Stirring must give a fully homogenized mixture (around 5 minutes).

4. Application

Apply **VIMEPOX SP-COAT** using a brush, a roll (with short hair), pistol or airless spraying.

General Remarks

- Make sure that ambient temperature when applying **VIMEPOX SP-COAT** is at least 10-12° C (so that substrate temperature is $\geq 8^{\circ}$ C) in order to allow hardening.
- Relative moisture must not exceed 70%

Otherwise, unfinished surface reaction of the coating may occur.

This could cause:

- Loss of polish (mat effect) and even worse:
- Creation of a non-hardened surface film that has to be removed by scrubbing and water (e.g. with an electric floor polisher and felt). The remaining mat coating will not present any strength problems.
- Moisture or dirt in the underlying fresh coat may have an adverse effect on bonding in successive coats
- Direct impact of water on the fresh epoxy coat surface up to 6 hours after coating, may have adverse effects depending on the increase in the ambient moisture: discoloration and/or sticking surface. Scrub and recoat the deteriorated surface.
- In the event that waiting time between applications of the successive **VIMEPOX SP-COAT** coats is longer than the allowed or if you are repainting old coatings, the surface that has already been coated with **VIMEPOX SP-COAT** must be scrubbed with a sander or a mosaic machine for removing surface polish. Then the new coat can be applied.

Application Examples – Consumption

1. Smooth sealing coat (paint) for wall and swimming pool floor concrete

1. Prepare substrate (see above)
2. Prime the substrate with **VIMEPOX PRIMER-S**
Consumption: 200-300 g/m² depending on substrate absorbability
3. Apply **VIMEPOX SP-COAT**, using a roll, in 2 –3 coats



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Consumption: 200-250 g/m² per coat

Apply each coat, after priming, only when the previous coat is dry. Waiting time is 16-20 hours (at 20° C) and must not exceed 24 hours.

The total thickness of coat for priming and 2 layers (x 250 g/m²) exceeds 400 µm.

! **Caution:** the concrete coat created by **VIMEPOX SP-COAT** is thin and therefore cannot cover even the smallest of imperfections at the surface, which, after applying the polishing coat, become even more visible.

Therefore, prior to applying **VIMEPOX SP-COAT**, coat the surfaces, especially the walls, with the resin improved cement mortar **VIMAPLAN**. Let the **VIMAPLAN** coat dry completely and then apply **VIMEPOX SP-COAT**.

! **Caution:** the swimming pool can be filled with water not earlier than 7 days after the application of the final coat, to ensure that **VIMEPOX SP-COAT** has developed its final strength.

2. Non slippery coat for concrete floors

After the first application of **VIMEPOX SP-COAT**, sprinkle M 31 quartz sand (0.1 – 0.7 mm) on the fresh coat. After the epoxy material has hardened, wipe away any excess sand.

Then apply 2 to 3 sealing coats of **VIMEPOX SP-COAT**, depending on the degree of anti-slippery you want to achieve.

Hygiene Measures – Precautions

VIMEPOX SP-COAT and primer **VIMEPOX PRIMER-S** contain solvents. Make sure that the room is well aired when using those products.

Hardeners of epoxy materials are corrosive and therefore the persons using them should take the necessary precautions: they must **wear plastic gloves and protective goggles**.

If contact of the resin, the hardener or their mixture with the skin occurs, wipe the material away using a napkin and then wash with soap and water (you may add 2% vinegar).

In case of contact with the eyes, wash with plenty of water within the first 10-15 minutes and then visit an ophthalmologist.

VIMEPOX SP-COAT and primer **VIMEPOX PRIMER-S** are absolutely harmless for your health after hardening.

Cleaning – Storing

Clean the tools using **VIMEPOX SOLVENT** immediately after use.



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Store the material in closed vessels and shady places under a temperature no higher than 25° C.

Resistance and waterproofing against liquid chemicals

<i>Test according to DIN 28052-6: 2001-08</i>			
Group of liquid chemicals	Group No.	Example of Liquids	Category *
Petrol engine fuels in accordance with DIN EN 228	1	Gasoline	++
Aircraft fuels	2	Kerosene	++
Heating petroleum EL in accordance with DIN 51603-1. Diesel in accordance with DIN EN 590, unused internal combustion engine oils, unused valvolines, mixtures from saturated and aromatic hydrocarbons with an aromatic content \leq 20% by mass and ignition point $>$ 55° C	3	Heating petroleum Diesel Internal combustion engine lubricant oils Valvolines	++
All hydrocarbons and used internal combustion engine oils and used valvolines, except for crude oil, benzolium and mixtures containing benzolium.	5a	Toluole, xylol, kerosene, white spirit	++
Univalent and polyvalent alcohols (methanol of max. content up to 48% by volume), glycol ethers	7a	Ethanol, propanol, isopropanol, butanol, glycol, red wine, beer	++
Aqueous solutions of organic acids (carboxylic acids) up to 10% and their salts (in aqueous solutions)	12a	Acetic acid 10% citric acid 10% tartaric acid 10% lactic acid 10% oleic acid 10%, orange juice, tomato juice, edible oils	++
Organic acids (carboxylic acids, except for formic acid) and their salts (in aqueous solutions)	12	Acetic acid $>$ 10%	-
Inorganic acids up to 20% and inorganic salts hydrolysed into an aqueous solution (pH $<$ 6), except for hydrofluoric acid and acids with an oxidising action and their salts	13	Hydrochloric acid 20% nitric acid 20% phosphoric acid 20% sulphuric acid 20%	++

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Group of liquid chemicals	Group No.	Example of Liquids	Category *
Inorganic bases and inorganic salts hydrolysed into an alkaline aqueous solution (pH > 8) except for ammonia solutions and solutions of salts with an oxidising action (e.g. hypochlorides)	14	Solution of sodium hydroxide 20% solution of potassium hydroxide 20%	++
Aqueous solutions of inorganic non-oxidising salts with pH 6-8	15	Water, sea water, salt solution (sodium chloride) calcium chloride solution	++

*** Assessment categories for VIMEPOX SP-COAT**

++ : Waterproof and resistant coat for 3 months

+ : Waterproof coat for 3 months, possible discolorations

(+) : Waterproof coat for at least 3 days, possible discolorations, swelling and/or reduction of surface strength

- : non-resistant coat