

# VAPOSHIELD

Waterproofing epoxy-cement vapor barrier

A three-component liquid epoxy vapour barrier waterproofing agent with high resistance to positive and negative buoyancy, to be used for waterproofing swimming pools, industrial flooring, screed against the ground, *Decorkrete* micro-cement systems and as a primer in the application of *Decork Design* on horizontal and vertical surfaces. The product consists of a special epoxy resin (part A), a catalyst (part B) and special cement (part C).

## BENEFITS

- Highly resistant to negative and positive pressure.
- Suitable for epoxy, polyurethane and concrete micro-topping systems.
- Ideal for moist concrete floorings.
- Suitable for floorings not provided with vapor barrier, before the application of *Diasen* resin coatings.
- Excellent filling and consolidating properties.
- Solvent free product.
- Multipurpose.

## YIELD

- 1,4 kg/m<sup>2</sup> (44 ft<sup>2</sup>/gal U.S.) as vapor barrier with a moisture content of the support < 4%;
- 2,0 kg/m<sup>2</sup> (31 ft<sup>2</sup>/gal U.S.) as waterproofing and vapor barrier with moisture content of the support between 4% and 18%.

Moisture content of the support has to maintain under the value written above during product application and drying time.

## COLOUR

Sand grey.

## PACKAGING

Each bucket contains the 3 components (A+B+C) already dosed, to be mixed.

10 kg (1.73 gal U.S.) plastic buckets.

Pallet:

- n° 48 buckets, 10 kg each (tot 480 kg ≅ 1060 lb).

## WATERPROOFING – liquids

## APPLICATION FIELDS

This product is suitable for use as a vapour barrier on damp screeds or counter floors (ground screed), in the application of *Decork Design* on floors and in micro-cement systems such as *Decorkrete*.

It can be used as a filler on tiled surfaces and as a waterproofing agent for swimming pools. Once cured, Vaposhield can only be coated with epoxy, polyurethane, *Decork Design* and *Decorkrete* microcement coatings.

Do not coat *Vaposhield* with acrylic products. Product for interior and exterior use.

## STORAGE

Store the product in its original containers tightly closed, in well aerated areas, away from sunlight, water, ice and kept at temperature between +5°C (+41°F) and +35°C (+95°F). Storage time: 12 months.

## PREPARATION OF THE SUPPORT

The substrate must be completely hardened (properly cured) and have sufficient strength. If not, restore with cement mortar. The surface must be thoroughly clean, well consolidated, without crumbling and inconsistent parts, trying to create as even and workable a substrate as possible.



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## Concrete

In the case of newly created cement foundations, they must be sufficiently cured and have undergone adequate shrinkage. In the case of large depressions and detachments, reinstatement with special cement mortar should be planned. Small cracks can be filled with *Vaposhield*.

## Tiles

Old floor coverings must be adhered to the substrate (if not, remove them and fill with cement mortar) and must not have any traces of detaching substances on the surface, such as grease, waxes, oils, chemicals, etc. Joints can be grouted with *Vaposhield* applied with a steel or rubber trowel.

Given the wide variety of tiles on the market, it is recommended to carry out a test to check the perfect adhesion of the system

## Industrial floors

In the case of newly created cement foundations, they must be sufficiently cured and have undergone adequate shrinkage. In the presence of large depressions, cracks or detachments, provide for a restoration with specific cement mortar. If necessary, on extremely smooth substrates, the substrate must be prepared by abrasion with a single brush or machines equipped with diamond tools, followed by careful suction of the resulting dust and/or washing with a scrubbing machine.

## Treatment of joints

Expansion, control or isolation joints must be treated prior to application of the waterproofing agent. The joints should be filled with *Diaseal Strong* polyurethane sealant (see technical data sheet). Once the sealant has completely dried, the joints should be waterproofed with *Polites TNT* fabric (see technical data sheet) cut into 10 - 15 cm wide strips and impregnated with *Vaposhield*, applied by brush. In the wall-floor

corner, a perimeter grout will be made with the same *Diaseal Strong* product. Once the sealant is completely dry, the joints will be waterproofed with *Polites TNT* fabric (see technical data sheet) using the same method as described for the joints, creating a pool effect. The points of contact with door and window thresholds should also be treated with *Diaseal Strong* sealant.

## MIXING

Open the epoxy mortar (part A) and pour it completely into the larger bucket. Open the cement (part C), pour it slowly into the bucket and mix. Open the hardener (part B), pour it completely into the bucket and mix the three components (A+B+C) of *Vaposhield* thoroughly until a homogeneous mixture is obtained. Use a professional mixer. Do not dilute if applied by spatula. If applied by roller, add 5% water. Do not close the container after mixing. *Vaposhield* gives rise to an exothermic reaction.

The addition of a higher percentage of water could compromise the effectiveness of the product. Never add foreign components to the mixture.

## APPLICATION

1. Wait for any primer used to dry completely.
2. Apply *Vaposhield* in 2 or more coats with a short-hair roller or American putty knife, making the product penetrate well into the substrate and ensuring total coverage of the surface. In the event of rain on a product that has not fully hardened, carefully check suitability for subsequent coating.
3. Apply the next layer once the underlying one has completely dried. Continue until the expected yield is reached. It is recommended to cross the layers during application
4. Any subsequent coats (epoxy and polyurethane coatings, *Decork Design*, *Decorkrete*, etc.) must be applied within 48 hours of the end of application.

## WATERPROOFING – liquids

The indications and prescriptions given, while representing our best experience and knowledge, are to be considered indicative and must be confirmed by exhaustive practical applications. Diaseal does not know the specifics of the application and even less the determining characteristics of the application support. Therefore, before using the product, the applicator must in any case carry out preliminary tests to verify its perfect suitability for the intended use and, in any case, assume all responsibility that may arise from its use. In the event of any uncertainties or doubts, contact the company's technical office before starting work, it being understood that this support is merely an aid for the applicator, who must in any case guarantee that he/she possesses adequate skills and experience for laying the product and for identifying the most suitable solutions. Always refer to the latest updated version of the technical data sheet, available at [www.diaseal.com](http://www.diaseal.com) which cancels and replaces all others.

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5. Do not apply acrylic coatings on top of the *Vaposhield* product.

## DRYING TIME

At 23°C (73.4°F) and 50% of relative humidity level, the product dries in 24 hours.

- Drying times are influenced by the relative humidity of the environment and temperature, and can vary significantly.
- If the product is applied in large thicknesses, drying times are significantly longer.
- Once cured, *Vaposhield* can be coated with epoxy finishes (such as *Epokoat Epoxy Paint*), polyurethane finishes, *Decork Design* or *Decorkrete*.

## SUGGESTIONS

- Do not apply at temperatures lower than +5°C (+41°F) or higher than +35°C (+95°F).
- During summer season apply the product in the cooler hours of the day, away from sun.

- When used outside, do not apply with imminent threat of rainwater or ice, in case of strong fog or relative humidity level higher than 70%.
- Protect the product from pouring rain until the complete drying.
- It is very important to make, at regular intervals, appropriate expansion joints on the screed. The designer will consider the size and the ways of making the joints according to the conditions of the support.
- Before the product application, it is recommended to cover each element that will not be coated.

## CLEANING

Wash tools with water before product hardens.

## SAFETY

While handling, always use personal protective equipment and respect the instructions described in product safety data sheet.

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\* These data even if carried out according to regulated test methods are indicative and may change varying the specific site conditions.

Technical data *			
Features			Unit
Yield		1,4 kg/m <sup>2</sup> $\cong$ 44 ft <sup>2</sup> /gal U.S. as vapor barrier with a moisture content of the support < 4%	kg/m <sup>2</sup>
		2,0 kg/m <sup>2</sup> $\cong$ 31 ft <sup>2</sup> /gal U.S. as waterproofing and vapor barrier with a moisture content of the support between 4% and 18%.	
Aspect		semi dense	-
Color		sand grey	-
Mixing water		maximum 5 % if applied by roll	%
Application temperature		+5 / +30	°C
		+41 / +95	°F
Pot life		5	
Waiting time between 1 <sup>st</sup> and 2 <sup>nd</sup> coat	T=23°C / 73.4°F; R.H. 50%	12	hours
Drying time		24	
Storage		12	months
Packaging		10 kg	kg
		2.64 gal U.S. plastic bucket	gal U.S.

Final performance		Units	Regulations	Results
Adhesion on concrete Adhesion test – pull off	1,75	MPa = N/mm <sup>2</sup>	UNI EN ISO 4624	good, break in the concrete
	253.81	lbf/in <sup>2</sup>	-	
Adhesion of Decork on Vaposhield Adhesion test – pull off	1,50	MPa = N/mm <sup>2</sup>	UNI EN ISO 4624	good, break between Vaposhield and Decork Design
	217.55	lbf/in <sup>2</sup>	-	
Adhesion of Pool Protector on Vaposhield Adhesion test – pull off	2,00	MPa = N/mm <sup>2</sup>	UNI EN ISO 4624	good, break in the substrate
	290.07	lbf/in <sup>2</sup>	-	
Salt resistance	-	-	-	good
Strong-bases resistance	-	-	-	good
Strong-acids resistance	-	-	-	slight softening of the product
Water absorption	9	%	-	-
Break elongation in 7 days	3.16 ± 1,53	%	EN ISO 527-1	-
Tensile strength	1,91 ± 0,11	MPa	UNI EN ISO 527-1	-
	277.01 ± 15.9	lbf/in <sup>2</sup>	-	



## WATERPROOFING – liquids