

FINISHES – paste

# DIATHONITE CORK RENDER

Coloured thermal finish made of cork (grain size 0 – 1 mm), eco-friendly, waterproof and breathable

Coloured finish made of cork (grain size 0 – 1 mm / 0 – 0.04 in), water based resins, siloxanes and diatomaceous earth, with high thermal insulating properties, water repellent and breathable. Eco-friendly product, to finish new and old façades, thermal plaster (such as *Diathonite Evolution*), external thermal insulation and pitched roofs. It impedes the water absorption by the masonry and it extends the durability of the plaster.

## BENEFITS

- Breathable.
- Water repellent.
- Suitable for cracked substrates, it avoids reinforced skim coat.
- Highly elastic.
- Ideal on cracked plasters.
- Excellent thermal comfort in combination with thermal plaster (such as *Diathonite Evolution*).
- It avoids the development of moulds.
- Resistant to UV rays, atmospheric factors, industrial and marine environments.
- Resistant to low and high temperatures.
- Thick application.
- “Tonachino” effect.
- Made of natural raw materials and LEED certified.
- Easy and quick to apply.

## YIELD

0.90 – 1.20 kg/m<sup>2</sup> in two coats – about 2 mm of thickness.

2.33 – 3.12 lb/ft<sup>2</sup> in two coats – about 0.08 in of thickness.

## COLOR

Diasen colour folder.

## APPLICATION FIELDS

The product is specifically designed to finish façades, old and new plasters, thermal plasters such as *Diathonite Evolution* (see technical data sheet), external thermal insulation or pitched roofs. It has excellent adhesion properties to any kind of substrates and it can be used in different situations: plasters, metal, wood and cement substrates. The product is suitable outside.

## PACKAGING

18 kg (39.68 lb) plastic bucket + 2 kg (4.41 lb) of colour.

Pallet: 32 buckets + 32 packages of colour.

## UB1 Colour

18 kg (39.68 lb) plastic bucket + 4.5 kg (9.92 lb) of colour.

Pallet: 32 bucket + 32 packages of colour.

## STORAGE

Store the product in its original containers perfectly closed, in well ventilated areas, away from sunlight, water and ice, at temperatures between +5°C (+41°F) and +35°C (+95°F).

Storage time: 12 months.

At conditions written above, the product's shelf life can be increased up to 18/24 months.



Diasen srl

Zona Industriale Berbentina, 5 Sassoferrato ANCONA

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EN 1504-2

Products and systems for the protection and restoration of concrete structures –

Part 2: Systems to protect concrete surfaces

Thermal conductivity:

$\lambda = 0.086 \text{ W/mK}$

Water vapor permeability:

$\mu = 15$



For application videos, product page, safety data sheet and other information.

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**DIASEN**  
GREEN BUILDING FUTURE

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Technical Data		
Features		Unit
Yield	0.9 – 1.2 kg/m <sup>2</sup> in two coats	kg/m <sup>2</sup>
	2.33 – 3.12 lb/ft <sup>2</sup> in two coats	lb/ft <sup>2</sup>
Aspect	paste	-
Colour	See colour chart	-
Specific weight	920 ± 20	kg/m <sup>3</sup>
	57.4 ± 1.25	lb/ft <sup>3</sup>
Dilution	If necessary max 5% of water (0.9 l / 0.24 gal U.S per 18 kg / 39.68 lb packaging)	-
Waiting time between 1 <sup>st</sup> and 2 <sup>nd</sup> coat (T=23°C/ 73.4°F; R.H. 50%)	about 8 – 10	hours
Grain size	0 – 1	mm
	0 – 0.04	in
Application temperature	+5 /+35	°C
	+41/+95	°F
Drying time (T=23°C / 73.4°F; R.H. 50%)	About 10	hours
Storage	12	months
Packaging	18 kg (39.68 lb) plastic bucket + 2 kg (4.41 lb) of colour UB1 Colour:	-
	18 kg (39.68 lb) plastic bucket + 4.5 kg (9.92 lb) of colour	

## Standard LEED for New Construction & Major Renovation, LEED for Schools, LEED for Core & Shell, v. 2009

Thematic area	Credit	Point
Energy & Atmosphere	EAp2 - Minimum Energy Performance	Mandatory
	EAc1 – Optimize Energy Performance	from 1 to 19
Materials & Resources	M Rc2- Construction Waste Management	From 1 to 2
	M Rc4 – Recycled Content	From 1 to 2
	M Rc5 – Regional Materials	From 1 to 2
	M Rc6 - Rapidly Renewable Materials	1
Indoor Environmental Quality	IEQc3.2 - Construction Indoor Air Quality Management Plan—Before Occupancy	1
	IEQc4.2 - Low Emitting Materials - Paints and Coatings	1

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Final performances		Unit	Regulations	Results
Elasticity	195%	-	ISO 527-1	-
Crack Bridging Ability	2.5	mm	-	-
	0.1	in		
Weathering Test	1680 hours (10 years*)	hours / years	EN ISO 11507	-
Thermal conductivity ( $\lambda$ )	0.086	W/m K	EN 12667	-
Adhesion to self levelling concrete screed (direct traction)	0.98 – 1.12	N/mm <sup>2</sup>	EN ISO 4624	-
	142.2 – 162.4	lbf/in <sup>2</sup>	-	-
Adhesion with <i>D20</i> to tuff Adhesion test - pull off	1.0	N/mm <sup>2</sup>	EN ISO 4624	excellent
	145	lbf/in <sup>2</sup>	-	-
Mandrel resistance	2.00	mm	ISO 1519	excellent
	0.08	In	-	-
Theoretical specific heat	1.8	KJ/kg K	-	-
Water vapour permeability	$\mu = 15$	-	EN ISO 7783	-

\* 1680 hours of weathering test are equal to about 10 years. This equivalence is merely indicative and it may vary depending on weather conditions where the product will be used. The above data, even if carried out according to regulated tests, are indicative and they may change when specific building site conditions vary.

## PREPARATION OF SUPPORT

The support must be completely hardened and resistant enough. The surface must be perfectly levelled, thoroughly clean, dry, without greases, oils, debris or detaching parts or other materials that may compromise the product adhesion.

In case of hydro-cleaning, wait for the complete drying of the support.

If the surface is crumbly in its entirety, totally scrape it until obtaining a good support; restore lesions and damaged parts with suitable mortar.

*Diathonite Cork Render* adheres to different kind of supports without the need of a primer; it is anyway recommended to perform a test in order to verify the adhesion or the need to use a primer.

## Diathonite plasters or new plasters

Make sure that the surface of the plaster is not rough, otherwise apply a coat of a suitable *Diasen* smoother. Both on smoothers and directly on plasters, apply the specific fixative *D20* (see technical data sheet).

## Old plasters

Make sure that the plaster is compact and well bonded to the support. Otherwise, partially or totally remove it and re-make it.

In case of painted plasters, according to the wide range of paints on the market, it is recommended to perform an adhesion test to verify the suitability of the application or the need to use the fixative *D20* (see technical data sheet).

Over rough plasters, *Diathonite Cork Render* can directly be applied. In case of dusty supports, use the fixative *D20* (see technical data sheet).

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## Concrete

In presence of lesions, holes or irregular areas, restore them with suitable cement mortar.

For the treatment of iron bars, apply *Anticorrosive 2K* (see technical data sheet).

To obtain a better adhesion on smooth and not moist concrete, it is recommended the use of *Grip Primer* (see technical data sheet).

On moist supports, in order to avoid blistering or detachment phenomena, use *Vapostop* (see technical data sheet) as primer.

If the support is subjected to rising damp, it is necessary the use of *WATstop* (see technical data sheet). *WATstop* can also be used to fill small cracks and fissures.

On rough concrete, use the primer *Vapostop*.

## Wood

Carefully clean the surface by removing the dust, crumbly or detaching parts.

The wood must be completely dry, well resistant and stable.

On not treated surfaces, the product can directly be applied.

In all other cases, perform a preliminary test to verify the adhesion.

## Metal

Perfectly clean the surface by removing the dirt and potential varnishes not well bonded.

Before the application of *Diathonite Cork Render*, treat the metal surface with *Grip Primer* (see technical data sheet).

In case of rust, before the application of *Grip Primer*, treat the surface with *Rust Converter* (see technical data sheet).

If the metal surface is painted, it is recommended to perform a test to verify the perfect adhesion of the system.

## Smooth surfaces

On particularly smooth and not absorbent surfaces, use *Grip Primer* (see technical data sheet).

For supports not mentioned in technical data sheet, please contact Diasen technical department.

## Treatment of joints

Potential joints on the support (joints between panels made of concrete or of other materials; expansion, control or insulation joints) must be treated before the application of *Diathonite Cork Render* with the polyurethane sealant *Diaseal Strong* (see technical data sheet).

## MIXING

- Pour completely the content of the bag in the bucket and add the entire colour.
  - Mix the compound with spiral drill for at least 2 or 3 minutes until obtaining a homogeneous mixture without clumps and with uniform colour.
  - The product is ready to use and generally it does not need to be diluted. In extremely hot climatic conditions, it is possible to add at max 5% of water (0.9 l of water per 18 kg packaging).
  - Mix again the compound.
- Do not add other substances to the mixture.

## APPLICATION

### Application by hand

1. Wait for the complete drying of the primer possibly used.
2. Apply a first abundant layer of *Diathonite Cork Render* by steel trowel with rounded edges. The first layer can be used as smoother to uniform the surface. In case of rain over not completely dry product, carefully verify the suitability of the next covering.
3. When the first layer is completely dry (about 10 hours at 23°C/73.4°F and 50% relative humidity) apply a second thin coat of product for the finish. For a better result and for a more homogeneous coating, it is recommended to cross the coats.
4. Smooth as soon after the application with a rounded edge plastic trowel.
5. Application time: about 80/110 m<sup>2</sup> per day.

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## Application by hopper gun DS-Spray Gun

1. Wait for the complete drying of the primer possibly used.
2. The hopper gun must have:
  - minimum pressure of the compressor 5.0 bar;
  - nozzle diameter 8.0 mm.
3. Apply a first coat of *Diathonite Cork Render* to cover the whole surface. In case of rain over not perfectly dry product, carefully verify the suitability of the next covering.
4. When the first layer is dry (about 10 hours at 23°C/ 73.4°F and 50% relative humidity), apply a second coat of *Diathonite Cork Render* to completely cover the substrate. For a better result and a more homogeneous covering, it is recommended to cross the coats.
5. Do not trowel.
6. Application time: about 200/250 m<sup>2</sup> per day.

*Diathonite Cork Render* can also be applied with the **spraying machine** DS-5500 Texture Sprayer, nozzle diameter 4.00 mm, pressure level 4 (4.0 atm). In this case the application time varies between 700 to 800 m<sup>2</sup> per day.

## DRYING TIME

At a temperature of 23°C/ 73.4°F and 50% relative humidity, the product dries in about 10 hours.

- Drying time is influenced by environmental relative humidity and by temperature and it may significantly change.
- During the drying time, protect *Diathonite Cork Render* from rain, ice, direct sunlight and wind for at least 2 hours, at a temperature of 23°C/73.4°F.

If applied with a higher amount than the expected one, drying time can significantly increase.

## SUGGESTIONS

- Do not apply at environmental temperature lower than +5°C (+41°F) and higher than +35°C (+95°F).
- During summer season, apply the product in the cooler hours of the day, away from sunlight.
- Do not apply with imminent threat of rain or frost, in conditions of strong fog or with relative humidity higher than 70%.
- Apply the product over completely dry surfaces.
- The product is not suitable for plane coverings. Possible water stagnations can create localised whitening.
- Before the product application, it is recommended to cover doorsteps, fixtures and each element that must not be coated.
- Store the un-used product in the original package.

## CLEANING

Wash tools with water as soon after use.

After the complete drying of the product, for the cleaning, it is recommended to use neutral detergents. Choose the most suitable cleaning method (sponge, brush or high-pressure water jet machine) according to the type of dirt.

## SAFETY

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

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