

FINISHES – paste

# DIATHONITE CORK RENDER

Cork based, colored, thermal finish, eco-friendly, breathable and waterproof  
(granulometry 0 – 1 mm)

Colored finish made of cork (granulometry 0 – 1 mm), water based resins, siloxanes and diatomaceous earth, with high thermal insulating properties, water repellent and breathable. Eco-friendly product, to finish new and old façade, thermal plaster (such as Diathonite Evolution), external thermal insulation and pitched roof. It impedes the water absorption by the masonry and it extends the durability of the plaster.

## BENEFITS

- Breathable.
- Water repellent.
- Suitable to cracked substrates, avoiding reinforced skim coat.
- Highly elastic.
- Excellent thermal comfort in combination with thermal plaster (such as *Diathonite Evolution*).
- It avoids mold.
- Highly resistant to weathering, UV rays and salty air.
- Resistant to low and high temperature.
- Thick application.
- “Intonachino” effect.
- Made of natural raw materials and LEED certified.
- Easy and fast to apply.

## YIELD

0.90 – 1.20 kg/m<sup>2</sup> – about 2 mm of thickness.  
1 gallon covers about 37.50 ft<sup>2</sup> for about 0.08 inch of thickness (2 coats application)

## COLOR

Diasen color folder.

## APPLICATION FIELDS

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

## PACKAGING

18 kg / 5.17 gal U. S. plastic bucket + 2 kg / 0.33 gal U. S. of color.  
Pallet: 32 bucket + 32 packaging of color.

## STORAGE

Store the product in original container, 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.



Diasen srl

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UNI 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 video,  
product page, safety data  
sheet and other information.

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Technical Data		
Features		Unit
Yield	0.90 – 1.20 1 gallon covers about 37.50 ft <sup>2</sup>	kg/m <sup>2</sup> 1 gal U.S. x ft <sup>2</sup>
Aspect	paste	-
Color	color chart	-
Specific weight	0.92 7.68	kg/l lb/gal
Dilution	if necessary 5% (0.9 lt each bucket of 18 kg; 0.24 gal U.S. of water per 5.17 gal U. S.)	-
Waiting time between 1 <sup>st</sup> and 2 <sup>nd</sup> coat (T=20°C, T=68°F; R.H. 40%)	about 8 - 10	hours
Granulometry	0 – 1	mm
Application temperature	+5 /+35 +41/+95	°C °F
Drying time (T=20°C, T=68°F; R.H. 40%)	about 10	hours
Storage	12 months in original container and in dry places	months
Packaging	18 kg / 5.17 gal U. S. plastic bucket + 2 kg / 0.57 gal U. S. of color.	kg - gal U.S.

LEED® Credits		
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	compulsory
	EAc1 – Optimize Energy Performance	from 1 to 19
Materials & Resources	MRC2- Construction Waste Management	from 1 to 2
	MRC4 – Recycled Content	from 1 to 2
	MRC5 – Regional Materials	from 1 to 2
	MRC6 - Rapidly Renewable Materials	1
	IEQc3.2 - Construction Indoor Air Quality Management Plan—Before Occupancy	1
Indoor Environmental Quality	IEQc4.2 - Low Emitting Materials - Paints and Coatings	1

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Final performances		Units	Regulations	Results
Elasticity	195%	-	ISO 527-1 ASTM D882-02	-
Crack bridging ability	2.5	mm	ASTM C1305-00	-
	0.098	in		
Weathering Test	1680 hours (10 years*)	hours / years	UNI EN ISO 11507 ASTM D4587	-
Thermal conductivity ( $\lambda$ )	0.086	W/mK	UNI EN 12667 ASTM C518	-
Adhesion to self leveling cementitious screed (direct traction)	0.98 – 1.12	N/mm <sup>2</sup>	UNI EN ISO 4624	excellent
Adhesion with D20 to tuff Adhesion test – pull off	1.0	MPa	UNI EN ISO 4624	excellent
Mandrel resistance	2.00	mm	ISO 1519	excellent
Theoretical specific heat	1.8	KJ/kg K	-	-
	0.43	Btu/lb °F	-	-
Water vapor permeability	$\mu = 15$	-	UNI EN ISO 7783	-

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

## PREPARATION OF SUPPORT

The substrate must be perfectly hardened, dry, and resistant. The surface must be thoroughly clean, well consolidated, without debris or detaching parts and perfectly leveled. Before the application of the product it is recommended to cover window sills, doorsteps, window and door fixtures and any element that will not be coated with *Diathonite Cork Render*. Eventual loose parts must be restored before the product is applied. *Diathonite Cork Render* adheres to various kinds of surfaces without primer. Anyway it is recommended to do an adhesion test and in case use an adhesion primer (such as *D20*).

### Diathonite plaster or new plaster

Make sure the plaster is well trowelled to have the smoother surface possible. If this is not possible, apply a coat of *Argacem HP* or *Argacem MP* (see technical data sheet). Onto dusty skim coats and plasters apply *D20* (see technical data sheet).

### Old plaster

Make sure the plaster is solid and well bonded to the substrate. If not, partially or totally remove the old plaster and re-apply it.

With painted plasters, given the wide variety on the market, it is recommended to do an adhesion test to verify the suitability of the application or if *D20* primer is needed (see technical data sheet).

Apply *Diathonite Cork Render* directly onto rough plasters. In case of dusty substrate use *D20* primer (see technical data sheet).

### Concrete

Restore damaged and crumbly concrete with *Buildfix CLS* (see technical data sheet).

Treat iron bars with *Anticorrosive 2K* (see technical data sheet).

Use *Grip Primer* (see technical data sheet) onto smooth concrete.

On humid surfaces use *Vaposhield* as a primer (see technical data sheet).

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## Wood

On wood surfaces apply *Grip Primer* (see technical data sheet) before the application of *Diathonite Cork Render*.

## Metal

Before the application of *Diathonite Cork Render*, on metal surfaces apply *Grip Primer* (see technical data sheet).

## Smooth surfaces

On very smooth and non – absorbent surfaces, use the specific primer *Grip Primer* (see technical data sheet).

For all not mentioned substrates in this technical data sheet, please contact Diasen Technical Dept.

## MIXING

- Open the bucket and the bag which contains the product and pour the bag content into the bucket.
- Add the whole package of color into the bucket.
- Mix the compound with a helical bit mixer at high speed for at least 2 or 3 minutes until obtaining a homogeneous mix, without lumps and with a uniform color.
- The product is ready to use and usually it does not need dilution. In very hot climate conditions, it is possible to add at max 5% of water (0.9 lt each bucket of 18 kg; 0.24 gal U.S. of water per 5.94 gal U. S.).
- Mix again the compound.
- Do not add anything to the mixture.

## APPLICATION

### Application by hand

1. If necessary, wait until primer is completely dry.
2. Apply a first abundant coat of *Diathonite Cork Render* by rounded edge steel trowel. The first coat can be used as rough coat to uniform the surface. In case of rain to a no perfectly dry surface, carefully verify the suitability of the next covering.
3. After the first coat is completely dry (after about 10 hours at 20°C and 40% of relative humidity), apply a second thin coat of product to finish the surface. For a better result and for a more homogeneous finish we recommend to apply the two coats crosswise.

4. Smooth as soon after the application with a rounded edge plastic trowel.
5. Application time: about 80 - 110 m<sup>2</sup> / 861 - 1184 ft<sup>2</sup> a day.

### Application by hopper gun DS-Spray Gun

1. If necessary, wait until primer is completely dry.
2. Hopper gun must have:
  - a. Minimum pressure of the compressor 5 bar / 73.5 psi;
  - b. Nozzle diameter 8.0 mm / 0.32 in.
3. Apply a first coat of *Diathonite Cork Render* to cover the entire surface. In case of rain to a no perfectly dry surface, carefully verify the suitability of the next covering.
4. After the first coat is completely dry (after about 10 hours at 20°C and 40% of relative humidity level), apply a second coat of *Diathonite Cork Render* to completely cover the surface. For a better result and for a more homogeneous finish we recommend to apply the two coats crosswise.
5. Do not trowel.
6. Application time: about 200 - 250 m<sup>2</sup> / 2153 - 2691 ft<sup>2</sup> a day.

*Diathonite Cork Render* can be applied with a **spray machine** DS-1500 Texture Sprayer, nozzle diameter 4.00 mm, pressure level 4 (4.0 atm). Application time varies between 700 to 800 m<sup>2</sup> / 7535 to 8611 ft<sup>2</sup> a day.

## DRYING TIME

At +20°C / +68°F and with relative humidity level of 40%, the product dries completely in about 10 hours.

- Drying time is influenced by relative humidity level and by temperature and may change significantly.
- Protect *Diathonite Cork Render* while curing from rain, ice, direct sunlight and wind for about 2 hours at +20°C / +68°F.

If you use more product than what it is recommended, drying time can significantly increase.

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## SUGGESTIONS

- Do not apply at room and substrate temperatures lower than +5°C/41°F or higher than +35°C/95°F.
- During summer season apply in the cooler hours of the day.
- Do not apply with imminent threat of rainwater or ice, with strong fog or relative humidity level higher than 70%.
- Apply to completely dry surfaces.
- The product is not suitable for flat roofs. Possible standing water may lead to localized color fading.
- Store the product in its original container.

## CLEANING

Wash tools with water as soon after use. After the complete drying of the product, for cleaning it is advisable to use neutral detergents, not too aggressive. Choose the most suitable method of cleaning (sponge, brush or high-pressure water jet machine) according to the type of dirt.

## SAFETY

For the handling, use protective equipment and see product safety data sheet.



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