



ard f.lli raccanello s.p.a. industria vernici e smalti

TECHNICAL SHEET **75**

CODE 0.554

beton decor coprente

Anti-carbonation hiding waterproofer for exterior concrete

GENERAL PROPERTIES

BETON DECOR is a product based on special acrylic styrene polymers in aqueous dispersion. It can be applied on highly alkaline substrates, such as concrete or asbestos cement without flaking.

BETON DECOR lends a low degree of water absorption and a highly water-repellent effect. Consequently, it prevents surfaces exposed to water from impregnation, thus avoiding the formation of efflorescence.

BETON DECOR features a powerful barrier against the passage of carbon dioxide & sulphur dioxide preventing the acidification of concrete, which would cause reinforcement corrosion. The treated substrate also retains a good water vapour permeability.

A painting cycle composed of BETON DECOR complies with the DIN 4108.3 standard. According to this standard, protective wall coatings must be very waterproof whilst featuring high water vapour permeability.

The requirements to be met are:

- Waterproofness: expressed as capillary water absorption $W < 0.5 \text{ kg/m}^2 \text{ h } 0.5$
- Breathability: expressed as vapour diffusion resistance $Sd < 2 \text{ metres}$
- Product: $W \times Sd < 0.1 \text{ kg/m h } 0.5$

BETON DECOR COPRENTE is a specific anti-carbonation product as its carbon dioxide diffusion resistance R_{CO^2} exceeds 50 metres.

BETON DECOR proves suitable for protecting and decorating interior & exterior mineral structures, such as concrete, asbestos cement and mineral structures in general.

When using "white" BETON DECOR, we recommend applying three coats in order to guarantee an optimum coverage.

INSTRUCTIONS

Surface preparation:

- Remove any unsound paintwork, brush thoroughly to remove filth, flaky paintwork & efflorescence. Treat mould with ARDSAN RISANANTE MURALE 0.916. Ensure the substrate is perfectly dry and apply two coats of BETON DECOR.

Particularly chalky substrates and asbestos cement must be treated with a layer of consolidating sealer ISOLEX 0.081. or PAINTGUM 7 FONDO COPRENTE. The latter is particularly suitable to avoid the floating of rust patches.

Application:

Apply BETON DECOR as follows:

- Brush: stir well & apply the first coat, thinning BETON DECOR at 60-65% by volume with water. Allow 4-6 hours before applying the second coat, thinning at 50-55% by volume with water.
- Roller: thin the product at 35-45% by volume with water.
- Do not apply at ambient or substrate temperature below +5°C or above +35°C. Avoid applying in direct sunlight.
After application, exterior surfaces must be protected from rain until completely dry, normally after approx. 48 hours at 20°C.
- Wash equipment immediately after use with water.
- If different batches are used, we recommend mixing the various products thoroughly to avoid any slight differences in colour.
- Store the product in cool, frost free premises.
- Surfaces with salt efflorescence or subject to rising damp must be restored before application in order to guarantee adherence.
- BETON DÉCOR is included in the in the 16COLOURS tinting systems. Surfaces with an irregular thermal conductivity should not be painted with colours featuring a reflection index below 40.
- The paint does not require a WARNING label according to the law in force.
- Use products in compliance with current Health & Safety Regulations. Dispose of spent material/containers according to the local regulations. Do not empty excess material into water tables.

Refer to the PSDS for further details.

TECHNICAL PROPERTIES

SPECIFIC WEIGHT	1380-1440 g/l	
VISCOSITY AT 20 °C	12,000 ± 2,000 cps	
WATER VAPOUR PERMEABILITY (DIN 52615) (1)	WDD=151.6 g/m ² 24 hrs	
EQUIVALENT AIR LAYER THICKNESS (1)	Sd = 0.142 m	
CAPILLARY WATER ABSORPTION (DIN 52617)	W=0.023 kg/m ² √t	
CO ₂ DIFFUSION RESISTANCE (2)	R CO ₂ = 1,330 ± 100 m	
APPEARANCE OF FILM	Satiny	
DRYING AT 20 °C	TOUCH DRY	4 hrs
	THROUGH DRYING	48 hrs
RECOATABLE	min 12 hrs	

(1) Certificate n° 5 dated 20/3/95.

(2) Certificate n° 093 C/LI/AT/95 dated 28/6/95.

YIELD

A two-coat painting cycle implies a yield of 6-6.5 m²/l on substrates with average absorption. The yield on mineral substrates depends on the product's porosity, we therefore, recommend testing.

SPECIFICATION ITEM**CONCRETE**

Application on pretreated concrete of two coats of protective paint like BETON DECOR COPRENTE, based on acrylic copolymers in aqueous dispersion & lightfast outdoor-resistant pigments with capillary water absorption according to the DIN 52617 standard $W < 0.5 \text{ kg/m}^2 \text{ h } 0.5$; water vapour permeability according to DIN 52615 standard $S_d < 2$ metres, and carbon dioxide diffusion resistance > 50 metres, with a minimum consumption of 0.15 l/m^2 .

€/m²

DEPARTMENT OF ENVIRONMENTAL SCIENCES
University of Venice

*Register N° SA/515
Venice, 20/03/95*

CERTIFICATE N° 5

Applicant: ARD F.lli Raccanello S.p.A. - Padua - Italy

Tested samples:

"Painting cycle involves applying BETON DECOR COPRENTE series .554". The samples were supplied pretreated by ARD F.lli Raccanello.

Test description and results:

The values shown refer to the average of the measurements taken on the three samples.

1) CAPILLARY WATER ABSORPTION (DIN 52617 standard).

The products were applied according to the methods and in the quantities specified in the technical sheet, on a mineral substrate measuring 10x10x3 cm with a mean capillary absorption of $W=8 \text{ kg/m}^2 \sqrt{t}$.

MEASURED VALUE $W = 0.023 \text{ kg/m}^2 \sqrt{t}$

2) WATER VAPOUR PERMEABILITY (DIN 52615 Wet-cup standard)

The products were applied on filter paper according to the methods and in the quantities specified in the technical sheet.

MEASURED VALUES

Water vapour permeability	WDD = 151.6 g/m ² 24 h
Thickness of the equivalent layer	Sd = 0.142 m
Thickness of the applied film	= 80 microns
Water vapour diffusion resistance factor	μ = 1,775

The measured data give the following result:

W.Sd = 0.0033 kg/m² √t

Director
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Analyst
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CSI RPR

093C/LI/AT/95

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Entered on the register of qualified laboratories.

Registered with the national research registry office Official Certification:

Fire - Extinguishers - Heat engineering - Isothermal Tests - Crash helmets - Taps and Valves - Auto Fittings

Test report

Applicant: ARD F.lli Raccanello S.p .A. - Padua - Italy

Tested product: .554-series BETON DECOR COPRENTE cycle

Sample received on: 19/04/95

Tests started on: 05/06/95

- *Identification of reference standards:* ASTMD 1434
- *Carbon dioxide permeability and MU calculation*
- *Identification of testing procedures and techniques*
- *Test condition:* 23 ± 1°C range RH 0%
- *Standardized internal procedure:* YES
- *Deviation from test methods:* NO
- *Calculation and data transfer check:* YES

DECLARATION

- The test results included in this report refer only to the tested samples.
- This report may not be reproduced in part without the authorization of the Laboratory Manager.

RESULTS

The permeability values measured are given in the table below:

CO ₂ TR 23°C RH 0%	MU x 10 ⁶	R metres	Test piece thickness μ
270-220	15.5 - 17.8	3,050 - 3,700	240 - 170

Since R is obtained by multiplying MU by the thickness of the test pieces, multiplying the MU value calculated by a thickness of 80 μ we get an R value in the range 1,240 to 1,424.

Date: 28/06/95

Chemistry-Physics Lab. Manager
Area Manager
S. Nestori

Centre Manager
Managing Director
P. Cau

The data herein were correct at the time of Quality Control & refer to standardized environmental conditions. The same are to be considered as a guide.

Revision 05/2010



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