

# Repcoat®

One component water based acrylic elastomeric protective anti carbonation coating system



## DESCRIPTION

Repcoat is a high build elastomeric, microporous coating exhibiting excellent resistance to attack from carbon dioxide, airborne chlorides and acid rain, with exceptional weathering resistance.

Repcoat has excellent crack bridging properties, yet provides a smooth protective, decorative coating for concrete and other masonry surfaces.

For effective anti-carbonation protection a two-coat treatment is recommended after the application of the silane siloxane based impregnating primer.

The product is formulated to give a tough flexible and coloured coating which will give a waterproofing coating to a wide variety of substrates. A textured finish may be obtained if required.

## APPLICATIONS

- » Bridge abutments.
- » External concrete surfaces of storage tank and masonry surfaces.
- » Multistory building and villas.
- » Where a high external tough coating is required.
- » Concrete cladding.

## ADVANTAGES

- » High build elastomeric, microporous coating.
- » Excellent resistance to carbon dioxide, airborne, chlorides and water borne.
- » Exceptional weathering resistance.
- » Excellent crack bridging properties.
- » Protective and decorative coating.
- » Excellent waterproofing characteristics.

## STANDARDS

Repcoat complies with the requirements of EN 1504-2 Surface Protection Systems Principles 1.3, 2.2 and 8.2.

## TECHNICAL PROPERTIES:

Colour:	White, grey, and can be available in different colours
Density:	1.35 ± 0.05 g/cm <sup>3</sup>
Solids content:	By weight 64 ± 2% By volume 53 ± 2%
Touch dry time:	30 - 60 min @ 25°C
Overcoating time between consecutive coats of Repcoat*:	2 hr @ 35°C 4 hr @ 25°C
Application temperature:	5 to 38°C
Elongation at break: ASTM D412	≥ 350% @ 7 days
Tensile strength: ASTM D412	≥ 1.5 MPa @ 7 days
Crack bridging capacity: ASTM C1305:95	> 2.5 mm
Carbonation depth: TM:NT Build 372:1991-02 700 hr @ severe conditions of humidity & 20% Co <sub>2</sub>	No penetration in coated sample 0.7 mm penetration in control
Chloride ion diffusion coefficient: TM:NT Build 492:1999-11	7.3 x 10 <sup>-15</sup> m <sup>2</sup> /sec
Reduction in chloride ion penetration in severe environment with focused applied voltage as per ASTM C1202	98%
Surface burning characteristics: ASTM E84	
Flame spread index (FSI): Smoke development index (SDI):	10 10
VOC:	< 50 g/ltr

*\*If more than one coat is needed.*



## METHOD OF USE

### SURFACE PREPARATION

The substrate should be sound clean and free from dust and all loose or flaking material. All holes and deep cracks should be filled with a suitable filler. All traces of oil, grease, chemical contaminants and extraneous matter should be removed.

Any traces of mould or algae must be removed and the area treated with a suitable anti-fungicide or bleach solution. Repcoat can be applied over green dry concrete, as long as Repcoat Primer is used.

### MIXING

Stir Repcoat thoroughly prior to use.

### PRIMING

Repcoat Primer is a ready for use, single component primer based on a silane/siloxane and an acrylic resin providing protection from rebar corrosion, efflorescence, freeze-thaw damage, water penetration, oil penetration, mold and mildew. This primer is used for all absorbent substrates before the application of Repcoat.

Repcoat Primer should only be applied over clean and sound substrates that are free from oil, grease and curing compounds. Repcoat Primer is applied at a rate between 0.1 - 0.2 litre/m<sup>2</sup> depends on the porosity of the substrates. It is important to wait for a minimum of 12 hours before the application of Repcoat.

Repcoat Primer will not only improve the adhesion of Repcoat on the substrates, but also it will reduce the CO<sub>2</sub> permeability and capillary water absorption of the system. The application of Repcoat Primer becomes more important when the system is applied over weak substrates such as cement board or non-structural repair mortar.

### APPLICATION

Repcoat can be applied normally at temperatures between 5°C and 38°C. Apply evenly with roller, brush or airless spray. For airless spray 5 - 10% dilution is recommended. A one coat or two-coat system may be used.

Two coats should always be used on dark, absorbent and heavily textured surfaces and when full carbonation protection is required. Porous, rough and irregular surfaces will reduce coverage rates.

Performance characteristics	EN 1504-2 requirements	Measured value
Permeability to CO <sub>2</sub> : EN 1062-6	$S_D > 50 \text{ m}$	$> 60 \text{ m}$
Permeability to water vapour: ISO 7783-1 ISO 7783-2	Class I: $S_D < 5 \text{ m}$ (Permeable) Class II: $5 \leq S_D \leq 50 \text{ m}$ Class III: $S_D > 50 \text{ m}$ (Not Permeable)	$S_D \leq 0.5 \text{ m}$ (Permeable to water vapour)
Capillary water absorption: EN 1062-3	$< 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$	$\leq 0.03 \text{ kg/m}^2 \cdot \text{h}^{0.5}$
Adhesion strength: EN 1542	$\geq 1.5 \text{ MPa}$	$\geq 2.0 \text{ MPa}$ (Flexible systems with trafficking)

### CLEANING

Tools and equipment can be cleaned with water.

### PACKAGING

Repcoat is available in 20 litre drums.

Repcoat Primer is available in 5 and 20 litre drums.

### COVERAGE

Repcoat: 0.38 litre/m<sup>2</sup> per coat to achieve 200 microns dry film thickness.

Repcoat Primer: 0.1 - 0.2 litre/m<sup>2</sup>, depending on the substrate porosity.

## **STORAGE**

Repcoat should be stored under dry warehouse conditions at temperatures between 10°C and 35°C.

## **SHELF LIFE**

Repcoat and Repcoat Primer have a shelf life of 12 months from date of manufacture if stored in proper conditions and sealed drums.

If these conditions are exceeded, contact DCP Technical Department for advice.

## **CAUTIONS**

### **HEALTH AND SAFETY**

As with all acrylic paints, care should be taken during use and storage to avoid contact with skin, eyes and mouth. Wear suitable protective clothing, gloves and eye/face protection.

Should accidental skin contact occur, remove immediately with plenty of clean water. If swallowed, seek medical attention immediately - do not induce vomiting.

For further information refer to the Material Safety Data Sheet.

## **FIRE**

Repcoat is nonflammable. Repcoat prime is flammable. DCP Solvent is flammable. Ensure adequate ventilation. Do not use near a naked flame and do not smoke during use.



# Repcoat®

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