Monodex Smooth

Decorative Anti-Carbonation Coating

Product Overview

Elastomeric, high build anti-carbonation coating for the protection of concrete and masonry substrates.

Description

MONODEX SMOOTH is a single component, water-based, decorative waterproof coating based on an advanced micropolymer resin binder which cross-links to give outstanding durability over a service life of 15 years. It provides protection against water ingress and carbonation whilst allowing damp substrates to breathe. Its elastomeric nature facilitates substrate movement and bridging of hairline cracks. It is available in a range of attractive colours and contains an active biocide to inhibit mould and lichen growth.

Uses

Suitable for surface protection systems principles 1.3, 2.2, 8.2 as defined in BS EN 1504-2.

Advantages

- High diffusion resistance to carbon dioxide, offering complete protection from the effects of carbonation.
- Active encapsulated in-film biocide inhibits the growth of mould, mildew and lichens.
- Advanced cross-linking micropolymer resin system forms a durable coating with excellent adhesion.
- Fast drying to permit two coat applications on the same day and facilitating year-round use.
- Low hazard, water-based product with no flash point. Equipment easily cleaned with water.
- Low water vapour diffusion resistance allows damp substrates to breathe and dry out without blistering.
- High colour pigment concentration obliterates strong underlying colours to produce an attractive matt finish.
- Easily reinforced locally over cracks and joints, or overall to effectively seal crazed surfaces to provide further protection and aesthetic properties.

Compliance

- UK & CE-Marked in accordance with BS EN 1504-2.

Application Instructions

Preparation

Areas to be treated must be free from unsound material, i.e. dust, oil, grease, mould release agents, corrosion by-products and organic growth. Mechanically remove surface laitance and any soft, sandy or flaking material. Use techniques to achieve the required degree of preparation, such as wet grit or water blasting techniques or equivalent approved methods. Seal blow holes and surface defects in existing concrete using **MONOLEVEL FC** or **MONODEX ICB**. Flexcrete Concrete Repair Mortars must be allowed to cure for a minimum of 24 hours. Leave concrete and cementitious screeds or renders for a minimum of 10 days, preferably 28 days.

Equipment

Brushes: Wide, soft nylon or bristle paint brushes.

Rollers: Use a heavy nap (¾" or 1") synthetic cover.

Spray: Airless spray can be used on smooth substrates; always finish off in one direction. Most types are suitable operating at 1500-3000psi tip sizes 17-23 thou.

Substrate Priming

Ensure substrate is dry, maximum 20% on Protimeter WME scale. Concrete should be primed with **BOND-PRIME** at a rate of up to 5m²/litre. Other porous substrates may be sealed with a coat of **MONODEX SMOOTH** diluted 25% with clean water. Sound painted surfaces do not require priming. Sealer or primer coats are applied by brush, roller or airless spray. Ensure complete coverage. Rough or porous surfaces will increase consumption. For further information, please refer to relevant Product Data Sheet and Priming Guide.

Treating Cracks and Joints

MONODEX ICB should be used locally or overall as a pre-treatment for hairline cracking and for filling live cracks, or construction joints. **MONOLEVEL FC** may be used to fill larger static cracks.

When bridging across expansion joints, the membrane may also be reinforced by embedding **FLEXCRETE FLEX-TAPE** in **MONODEX ICB**. Allow to dry, and if necessary, lightly sand to remove any prominent edges before overcoating the whole area with two coats of **MONODEX SMOOTH**.

Overall reinforcement incorporating **CEMPROTEC GFM** random weave glass fibre matting may be used over larger areas. Further information is available through our Technical Department.

Coating Application

Apply **MONODEX SMOOTH** by brush, roller or airless spray at the coverage rates below. Allow to dry for 1-4 hours in ideal conditions until touch dry before applying a second coat. To assist application and to act as a guide to coverage rates, each coat may be applied in a contrasting colour.

Coat	Coverage Rate			
	l/m²	m²/l	WFT (µm)	DFT (µm)
1st	0.2	5.0	200	
2nd	0.2	5.0	200	
Overall	0.4	2.5		Nominal 240

Coverage rates are for smooth, non-absorbent surfaces. Make allowances for uneven or absorbent surfaces.

Cleaning and Storage

- All tools should be cleaned with water immediately after use.
- Shelf-life is 2 years for unopened containers stored in dry, frost-free conditions away from heat.

Packaging and Coverage

- **MONODEX SMOOTH** is supplied in 15 litre containers.
- 15 litres will cover approximately 37.5m².

Health and Safety

- Safety Data Sheets are available on request.

Application Top Tips

1. If possible, complete work using only one batch number. As with any paint, avoid using different batch numbers on the same elevation or inter-mix batches to ensure continuity of colour.

2. Rough, porous or irregular substrates will reduce coverage.

3. For brush application use wide, soft nylon or bristle brushes.

4. For roller application use heavy knap (¾" or 1") synthetic cover.

5. Airless spray can be used with care on smooth substrates only. Always finish off in one direction. Most types of equipment are suitable (1500-3000psi with tip sizes of 17-23 thou).

6. A good spray finish can be achieved with a Graco Ultra Max II 490 electric airless spray pump using a 19 thou tip at 2700psi.

7. To assist application and to act as a guide to coverage rates during application, the base coat may be applied in a similar but contrasting colour.

8. Regularly check the coating thickness during application using a wet film thickness gauge.

9. Clean brushes and rollers occasionally during use.

10. Regularly clean spray nozzles to avoid blockages.

11. Curing/drying is temperature dependant. As a guide the coating will be touch dry in approximately 1 hour in hot conditions (>30ºC), 2 hours at 20ºC and 4-12 hours at lower temperatures (<10ºC).

12. The product is through-cured in 2-24 hours dependent on ambient temperature.

13. Spray equipment must be emptied and flushed at the end of the working day.

14. Cold Weather Working (See separate Guide)

- ≥3ºC providing this is 2ºC above dew point.
- Do not use any product which has been frozen.

15. Avoid prolonged storage at high temperatures (≥35°C).

Technical Data

Property	Standard	EN 1504-2 Requirement	Typical Result
Adhesive Bond	EN 1542	≥ 0.8 MPa Crack bridging or flexible systems	≥ 2.5 MPa
Water Vapour Permeability (Equivalent Air Layer Thickness)	EN ISO 7783	Class I (Permeable) S_D< 5m	S_D = 0.48m
Permeability to CO_2	EN 1062-6	S_D ≥ 50m (R)	S_D = 320m @ 240µm DFT
Equivalent Concrete Thickness		-	(S_C) = 798mm
Liquid Water Transmission Rate (Capillary Absorption)	EN 1062-3	Class III (Low) w< 0.1kg.m^{-2}.h$^{-0.5}$	w = 0.014kg.m^{-2}.h$^{-0.5}$ @ 240µm DFT
Static Crack Bridging	EN1062-7	Class A3>0.50mm Class A2>0.25mm	1mm at 20°C 0.3mm at -10ºC
Elongation at Break	BS 903 Part A2	-	279% at 240µm DFT (Unreinforced) 27% at 1100µm DFT (Reinforced GFM 225)
Tensile Strength	BS 903 Part A2	-	1.4 MPa
Accelerated Weathering	EN 1062-11	-	No blistering, cracking or flaking after 20,000 hours QUV-B weathering
Solids Content		-	63.9% (weight) 59% (volume)
Specific Gravity		-	1.42
VOC Content		-	< 0.07% by mass
Minimum Application Temperature		-	3ºC
Reaction to Fire	EN 13501-1	-	Class F

The properties given above are obtained from laboratory tests: results obtained from on-site testing may vary according to site conditions.

MINIMAL VOCs. (Volatile Organic Compounds) contribute to atmospheric pollution. © 2019 BRITISH COATINGS FEDERATION LTD ALL RIGHTS RESERVED

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