



# Monodex Clear

## Clear, Water-Based, Anti-Carbonation Coating



### Product Overview

**Transparent, elastomeric, water-based anti-carbonation coating. CE-Marked in accordance with BS EN 1504-2.**

### Uses

For application to external walls and façades providing an effective barrier to water penetration and offering complete protection from the effects of carbonation. Enhances the natural appearance of the underlying substrate. Suitable for surface protection systems principles 1.3, 2.2, 8.2 as defined in BS EN 1504-2.

### Advantages

- Outstanding protection against the effects of carbonation, chloride ions and aggressive chemicals.
- Retains the surface texture of the substrate it is protecting and enhances the original appearance.
- Self-priming and rapid drying, allowing two coats to be applied in a single day.
- Low hazard, low VOC (Volatile Organic Content) and virtually odourless.
- Water-based product with no flash point, equipment easily cleaned with water.
- Cures to form a clear, satin finish which sheds dirt and retains clarity throughout its long life.
- Active encapsulated in-film biocide inhibits the growth of mould, mildew and lichens.
- Water-repellent finish, yet allows damp substrates to breathe and dry out without blistering.

### Description

**MONODEX CLEAR** is a single component, waterborne, transparent coating that offers an excellent defence against carbon dioxide ingress and the effects of weathering, significantly prolonging the maintenance free life of buildings and structures. Applied without a primer, it forms a clear, satin finish that retains the original appearance of the concrete substrate to which it is applied. It prevents water ingress, yet allows damp substrates to breathe and dry out, and is both dirt and UV resistant. Long term protection from the growth of mould and fungi is assured

with the use of advanced encapsulated biocide technology to help maintain its original appearance.

### Compliance

- CE-Marked in accordance with BS EN 1504 Part 2. Suitable for surface protection systems principles 1.3, 2.2, 8.2 as defined in BS EN 1504-2.

### Specification Clause

The anti-carbonation coating shall be a single component, waterborne, transparent coating that is CE-Marked in accordance with BS EN 1504-2. It shall comply with the following performance specification:

- Permeability to Carbon Dioxide no greater than  $2.76 \times 10^{-7} \text{cm}^2/\text{s}$  in accordance with EN 1062-6 (equivalent concrete thickness of 210mm and equivalent air layer thickness 83m at  $150\mu\text{m}$  dry film thickness).
- No blistering, cracking or flaking after at least 2,500 hours QUV-B weathering in accordance with EN 1062-11.
- Water vapour transmission no greater than  $50\text{g}/\text{m}^2/\text{day}$  in accordance with BS EN ISO 7783-2.

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EN1504-2: Surface Protection Systems - Coating Protection  
Against Ingress (PIC)

Adhesive Bond	: Pass $\geq 0.8 \text{ MPa}$
Permeability to Water Vapour	: Class I $< 5\text{m}$
Permeability to $\text{CO}_2$	: Pass $R > 50\text{m}$
Capillary Absorption	: Class III $< 0.1 \text{ kg}\cdot\text{m}^{-2}\cdot\text{h}^{0.5}$
Artificial Weathering	: 2,500 hours
Dangerous Substances	: Complies with 5.4
Reaction to Fire	: Euroclass F





Technical Data / Mechanical Characteristics

Property	Standard	BS EN 1504-2 Requirement	Result
Adhesive Bond	EN 1542	≥ 0.8 MPa Crack bridging or flexible systems	> 3.42 MPa
Water Vapour Permeability (Equivalent Air Layer Thickness)	BS EN ISO 7783-2	Class I (Permeable) S <sub>D</sub> < 5m	S <sub>D</sub> = 0.42m
Permeability to CO <sub>2</sub>	EN 1062-6	S <sub>D</sub> ≥ 50m (R)	S <sub>D</sub> = 83m @ 150µm DFT
Equivalent Concrete Thickness			(S <sub>C</sub> ) = 210mm @ 150 µm DFT
Liquid Water Transmission Rate (Capillary Absorption and Permeability to Liquid water)	EN 1062-3	Class III (Low) w < 0.1kg.m <sup>-2</sup> .h <sup>-0.5</sup>	w = 0.02kg.m <sup>-2</sup> .h <sup>-0.5</sup> @ 154µm DFT
Elongation at Break	BS 903 Part A2	-	164%
Tensile Strength	BS 903 Part A2		1.15 MPa
Accelerated Weathering	EN 1062-11	-	No blistering, cracking or flaking after 2,500 hours QUV-B weathering
Solids Content			33.6% (wt) 38.0% (vol)
Specific Gravity			1.04
VOC Content			< 0.29% by mass
Minimum Application Temperature			3°C
Reaction to Fire	EN13501-1	Euroclass	Euroclass F

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

Application Instructions

Preparation

The areas to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Surface laitance and any soft, sandy or flaking material should be removed by mechanical means back to a sound surface, suitable for treatment. Use techniques capable of achieving the required degree of preparation. Fill static cracks and other minor defects such as blow holes to achieve a super-fine finish with **MONORUB**, available in White and Grey formulations, which can be blended to match the substrate colour. Allow to cure for a minimum of 24 hours before proceeding.

Substrates contaminated by mould, algae, mildew, bacteria, etc., require pre-treatment with **BIODEX WASH** (Clear). Please consult the separate Technical Data Sheet and Application Guide.

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 11-19 thou.

Coating Application

Apply **MONODEX CLEAR** over the surface dry substrate by brush, roller or airless spray at the coverage rates below, taking care not to entrap air into the coating. Allow to dry for a minimum of 1-2 hours in ideal conditions until touch dry before applying a second coat. Do not apply if rain is imminent.

Coat	Coverage Rate			
	l/m <sup>2</sup>	m <sup>2</sup> /l	WFT (µm)	DFT (µm)
1 <sup>st</sup>	0.2	5.0	200	
2 <sup>nd</sup>	0.2	5.0	200	
Overall	0.4	2.5		Nominal 150

A 5 Litre unit covers approximately 12.5m<sup>2</sup>

A 15 Litre unit covers approximately 37.5m<sup>2</sup>

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

**MONODEX CLEAR** is supplied in 5 and 15 litre plastic containers.

## Health and Safety

Safety Data Sheets are available on request.

The information herein is correct to the best of our knowledge, but it does not necessarily refer to the particular requirements of the customer. If the customer has any particular requirements it should make them known in writing to Flexcrete Technologies Limited, and obtain further advice accordingly.



FM 41091  
EMS 597350  
OHS 597351

Quality  
Environmental  
Health & Safety

### Application Top Tips

1. Rough, porous or irregular substrates will reduce coverage.
2. For brush application use wide, soft nylon or bristle brushes.
3. For roller application use medium pile ( $\frac{3}{4}$ " or 1") synthetic cover.
4. Airless spray can be used with care on smooth substrates only; always finish off in one direction. Most types of equipment are suitable; operating at 1500-3000psi with tip sizes of 11-19 thou.
5. An acceptable spray finish can be achieved with a Graco Ultra Max II 490 electric airless spray pump using a 17 thou tip at 2000psi.
6. Regularly check the coating thickness during application using the wet film thickness gauge available from Flexcrete.
7. Take care not to entrap air as this will affect its transparency.
8. Clean brushes and rollers occasionally during use.
9. Regularly clean spray nozzles to avoid blockages.
10. Curing/drying is temperature dependent. As a guide the coating will be touch dry in approximately 1 hour at 20°C. and 2 hours at lower temperatures (<10°C.).
11. The product is through-cured in 2-12 hours dependent on ambient temperature.
12. Spray equipment must be emptied and flushed at the end of the working day.
13. Cold Weather Working (See separate Guide)
  - $\geq 3^{\circ}\text{C}$ . providing this is  $2^{\circ}\text{C}$ . above dew point.
  - Do not use any product which has been frozen.
14. Avoid prolonged storage at high temperatures ( $\geq 35^{\circ}\text{C}$ .).