



# Monodex UVC

## Highly Elastomeric UV Cured Waterborne Coating



### Product Overview

**Water-based, highly elastomeric, decorative, high build coating for concrete and masonry substrates.**

### Uses

To provide waterproof protection to concrete and masonry substrates where substrate movement is expected.

### Advantages

- Very flexible with a tough, dirt resistant outer layer. Moves with the building and able to accommodate thermal expansion without cracking in structures, even in extreme temperatures (-50°C. to +80°C.).
- Incorporates the latest UV curing system with vastly improved physical properties e.g. superior bond and adhesion, improved abrasion resistance.
- Water-based, eco-friendly coating with no hazardous solvents or odours released on application.
- Single component product with no mixing required on-site.
- Active encapsulated in-film biocide inhibits the growth of mould, mildew and lichens.
- Waterproof and able to provide excellent protection against the effects of carbonation.
- Permanently bridges dynamic cracks on concrete substrates.
- Long-lasting with a lifespan of 15-20 years.
- Range of attractive colours available with special colours made to order.

### Description

**MONODEX UVC** is a water-based, high build coating which is highly elastomeric over a wide temperature range providing a durable, weatherproof and waterproof finish to substrates where movement is expected. It is based on an acrylic / acrylonitrile copolymer incorporating the latest UV curing system, which gives a hard, dirt resistant surface with a softer, flexible core to provide excellent crack bridging properties.

**MONODEX UVC** has very low diffusion resistance to water vapour, allowing substrates to breathe and dry out, whilst exhibiting complete resistance to the ingress of water in liquid form. 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. The product is easily applied by brush, roller or spray and the surface cures quickly to give rapid resistance to rain.

### Specification Clause

The anti-carbonation coating shall be an elastomeric, waterproof coating based on acrylic / acrylonitrile copolymer incorporating a UV curing system. It shall comply with the following performance specification:

- Service temperature of -20°C. to +80°C.
- Elongation at break at 312µm / 20°C. of at least 870% in accordance with BS903 Part A2.
- No blistering, cracking or flaking after at least 20,000 hours QUV-B weathering in accordance with EN 1062-11.
- Water vapour transmission no greater than 30g/m<sup>2</sup>/day in accordance with BS EN ISO 7783-2.



## Technical Data / Mechanical Characteristics

Property	Standard	Result
Basis		UV cured acrylic/acrylonitrile
Solids Content		61.0% by weight 52.2% by volume
Adhesive Bond	EN 1542:1999	> 1.5 MPa at typical DFT
Specific Gravity		1.29
VOC Content		1.86g/litre
Water Vapour Permeability (Equivalent Air Layer Thickness)	EN 7783-2	0.72m (Class 1 <5m equivalent air layer thickness)
Elongation at Break	BS 903 Part A2	Unreinforced at 312µm DFT -20°C. > 870% +20°C. > 870% +80°C. > 480%
Accelerated Weathering	EN 1062-11	No blistering, cracking or flaking after 20,000 hours QUV-B weathering
Curing/Drying Time (approx.)		Touch dry in 45 mins at 20°C. Dry to overcoat in 1-2 hours normally Through cured in 2-12 hours (dependent on temperature)
Minimum Application Temperature		3°C
Service Temperature		-20°C to +80°C
Fire Properties		In compliance with BS 476 Part 6 & Part 7
Anti-Microbial Properties		Resistant to mould, fungi, algae and bacteria: Encapsulated in-film protection does not support the colonisation of a wide range of species.

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, mould release agents, 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 large static cracks and other defects with **MONOLEVEL FC**, **MONODEX ICB** or **MONOLEVEL 250F** if a finer finish is required and allow to cure for a minimum of 24 hours. Please contact our Technical Department for advice on levelling and screeding materials.

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

### Equipment

Brushes: Wide, soft nylon or bristle paint brushes.

Rollers: Use a medium pile roller.

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 15-23 thou.

### Priming of Concrete

Ensure substrate moisture content is less than 20% wood moisture equivalent. Apply **BOND-PRIME** to prepared surfaces at a rate of up to 5m<sup>2</sup>/litre by brush, roller or airless spray. Ensure complete coverage. Rough or porous surfaces will increase consumption. For further information, please refer to relevant data sheet and priming guide.

## Coating Application

Apply **MONODEX UVC** membrane over the primed, dry surface, by brush, roller or airless spray at the maximum coverage rate given below. Allow to dry for a minimum of 1-4 hours until touch dry before applying a second coat as above. To assist application and to act as a guide to coverage rates during application, each coat may be applied in a contrasting colour.

Coat	Coverage Rate			
	l/m <sup>2</sup>	m <sup>2</sup> /l	WFT (µm)	DFT (µm)
1 <sup>st</sup>	0.3	3.33	300	
2 <sup>nd</sup>	0.3	3.33	300	
Overall	0.6	1.67		Nominal 312

A 15 litre unit covers 25m<sup>2</sup>

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

## Reinforcing Cracks and Joints

**MONODEX UVC** will accommodate hairline cracks. Reinforce over live cracks, construction joints and joints between dissimilar materials with **FLEXCRETE FLEX-TAPE** to provide strategic strengthening. Fill gaps with a suitable exterior grade flexible filler. When treating expansion joints, apply masking tape (at least 25mm wide) centred over the joint. Apply a local embedment coat into which the reinforcement is placed whilst the coating is still wet. Allow to dry, and if necessary lightly sand to remove any prominent edges before overcoating the whole area with two coats of **MONODEX UVC**. Overall reinforcement with **CEMPROTEC GFM** random weave glass fibre matting is also available. Please contact our Technical Department for further information.

## 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 UVC** is supplied in 15 litre containers.

## 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 full 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 a short or medium pile 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; operating at 1500-3000psi with tip sizes of 15-23 thou.
6. We have found that an acceptable 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 the wet film thickness gauge available from Flexcrete.
9. Clean brushes and rollers occasionally during use.
10. Regularly clean spray nozzles to avoid blockages.
11. Curing/drying time is temperature dependent. As a guide the coating will be touch dry in approximately 1 hour in hot conditions (>30°C.), 2 hours at 20°C. and 4-12 hours at lower temperatures (<10°C.).
12. 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)
  - ≥3°C. providing this is 2°C. above dew point.
  - Do not use any product which has been frozen.
15. Avoid prolonged storage at high temperatures (≥35°C.).

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.

