

DATA Sheet



DECADEX

USES

DECADEX is a water based, permanently elastomeric coating with a proven track record for the protection of reinforced concrete structures from the effects of carbonation. It also provides protection against aggressive atmospheric pollution, chloride ions and water ingress, yet allows damp substrates to breathe without blistering. The product is available in several attractive colours and is also self-cleaning, offering a long lasting, aesthetic finish.

ADVANTAGES

ANTI-CARBONATION	Very high diffusion resistance to carbon dioxide.
ELASTOMERIC	Resin rich formulation which cures to form a permanently elastomeric membrane capable of facilitating movements in the substrate and bridging hairline cracks.
COMPLIANCE	Approved by the BBA, Certificate No. 92/2837.
SAFE	Low hazard, water based product with no flash point. Equipment easily cleaned with water.
BREATHABLE	Low water vapour diffusion resistance allows damp substrates to breathe and dry out without blistering, whilst still providing a tough, impenetrable barrier to further water ingress.
SELF-CLEANING	Unique water repellency by "beading" removes dirt particles without streaking effect.
REINFORCEABLE	Reinforcement may be incorporated to strengthen the membrane over unstable substrates and joints.
MAINTENANCE	Easily and quickly repaired and maintained.

PRODUCT DESCRIPTION

DECADEX is a single component, resin rich, high build, anti-carbonation coating based on a synthetic rubber/styrene-acrylic copolymer formulation. It cures to form a tightly adherent, decorative, weatherproof coating with very high diffusion resistance to carbon dioxide, making it ideal for the protection of reinforced concrete structures from carbonation. The cured membrane is permanently elastomeric and does not embrittle or crack on ageing, enabling it to facilitate movements in the substrate and to bridge hairline cracks, giving outstanding durability. The product has been designed to offer low diffusion resistance to water vapour, enabling the free passage of entrapped moisture from the substrate without blistering the coating or weakening its adhesion, whilst still providing a tough, impenetrable barrier against further water ingress. **DECADEX** is available in a range of attractive colours and its chemical and pollution resistant surface is self-cleaning to preserve its aesthetic appearance.

TECHNICAL DATA

Basis:	Synthetic rubber/styrene-acrylic copolymer.
Solids Content (by weight):	60.5%.
Specific Gravity:	1.25.
Colours:	Please consult our Technical Department for colour range..
Application Temperature:	Minimum 3°C.
Touch dry:	60 minutes (5°C) 45minutes (20°C)
Full Cure:	110minutes (5°C) 60 minutes (20°C)

MECHANICAL CHARACTERISTICS (TYPICAL)

Minimum Overcoat Time: Overnight.

Water Vapour Diffusion Resistance:

DIN EN ISO 7783-2:

$$\mu_{H_2O} = 2,180$$

$$S_D = 0.545m \text{ at } 250mm \text{ DFT}$$

$S_D \leq 4m$ allows an acceptable transmission of water vapour.

Carbon Dioxide Diffusion Resistance:

Engelfried Technique (DIN EN 1062-6):

$$\mu_{CO_2} = 2,610,000$$

Equivalent air layer thickness:

$$R = 652m \text{ at } 250mm \text{ DFT}$$

$R \geq 50m$ provides an effective barrier to carbon dioxide.

Note: The accuracy of the test is diminished with high performance coatings with $R > 200m$

APPLICATION DATA

Full test bulletins and further test data available on request.

PREPARATION

Application Guide available on request.

The areas to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Where necessary, use **FLEXCRETE DEGREASANT** and **FLEXCRETE BIOWASH** as instructed on the individual data sheets. Surface laitance and any soft, sandy or flaking concrete should be removed back to a sound surface, suitable for treatment. Use techniques capable of achieving the required degree of preparation, such as shot blasting or grit/water jetting on large areas or needle gunning or bush hammering on smaller areas.

All Flexcrete Concrete Repair Mortars must be treated with **FLEXCRETE CURING MEMBRANE** and allowed to cure for a minimum of 72 hours. Concrete and cementitious screeds or renders must be a minimum of 10 days old and preferably 28 days.

Please contact our Technical Department for further advice on treating alternative substrates.

EQUIPMENT

- Brushes: Wide, soft nylon or bristle paint brushes.
Rollers: Use only for applying primers on flat, low absorbency surfaces and for embedding reinforcement.
Spray: Most types of industrial airless spray equipment are suitable at 2500-3000psi with 19-29 thou tip size. Further details are available on request.

PRIMING

Ensure the moisture content of the substrate is less than 20% wood moisture equivalent. Apply one coat of **BONDING PRIMER** to the whole of the prepared concrete and repaired surfaces to be treated, at a maximum spread rate of up to 8 square metres per litre by brush, roller or airless spray. Ensure complete coverage, free from pinholes or misses. Rough, porous or uneven surfaces can considerably reduce coverage.

COATING

Apply **DECADEX** over the primed, dry surface, by brush, roller or airless spray at the specified coverage rate given below. Allow to dry for a period of 4 to 24 hours, depending upon prevailing atmospheric conditions, before applying a second coat as above. To assist application and to act as a guide to coverage rates during application, apply each coat in a different colour, e.g. white over light grey.

Coverage Rates:

COAT	COVERAGE RATE			
	l/m ²	m ² /l	WFT(µm)	DFT(µm)
10 year System:				
1st coat	0.25	4.0	250	
2nd coat	0.25	4.0	250	
OVERALL	0.5	2.0		≈250
15 year System:				
1st coat	0.33	3.0	330	
2nd coat	0.33	3.0	330	
OVERALL	0.66	1.5		≈330

REINFORCEMENT

CRACKS AND JOINTS

Live cracks, expansion or construction joints and joints between dissimilar materials must be reinforced with **LPL REEMAT HDT 75** to provide strategic strengthening. Apply an embedment coat of **DECADEX** at 0.6 litres/m², i.e. 0.6 litres per 10m length including embedment allowance, and embed the reinforcement, centred over the crack or joint, into the coating whilst it is still wet. Expansion joints should first be covered with masking tape, minimum width 25mm, centred over the joint. Allow to dry before overcoating the whole area with two coats of material, using the coverage rates and techniques described above.

UN SOUND SUBSTRATES

Substrates which are unsound, e.g. multi-cracked surfaces, mosaic tiles, exposed aggregate finishes, etc., or which require strengthening to provide even greater resistance to excessive thermal and structural movement, should be reinforced with **LPL REEMAT GFM 100**. Apply an embedment coat of **DECADEX** at a minimum of 0.5 litres/m² and embed the reinforcement using a roller, ensuring all edges are overlapped by 3-5cm. After a few seconds the **LPL REEMAT GFM 100** becomes easily mouldable, allowing surface contours to be followed and overlaps to be blended to give a continuous layer. Allow to through dry before the application of the top coat of **DECADEX** to give an overall coverage rate of 1.0 litre/m². Alternative reinforcement systems are available. Please contact our Technical Department for further information.

IMPORTANT NOTES

Do not thin or brush out like conventional paint. Do not apply below 3°C or to frozen substrates. Ensure the temperature is a minimum of 3°C above dew point. Do not apply when rain is imminent or if the humidity exceeds 90%. Do not use on soffits liable to water penetration from above. If more than 7 days elapse after application of the first coat, apply **BONDING PRIMER** and allow to dry before application of the second coat. Natural weathering of the membrane may cause slight darkening of the colours. White may show a slight creamy tint on ageing. Coverage rates quoted are for smooth, non-absorbent surfaces. Allowances should be made for uneven or absorbent surfaces. Application to cementitious substrates or repair mortars which are uncured or in excess of stated moisture content, may result in temporary discoloration.

CLEANING

All tools should be cleaned with water immediately after use.

STORAGE

Store in frost free conditions in tightly sealed containers away from heat.

SHELF LIFE

2 years with unopened containers under the above storage conditions.

PACKAGING

Pack Size: 15 litres.

SAFETY DATA

Safety Data Sheet available on request.

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