Concrete Repair & Protection
In Accordance with EN1504

www.nufins.com
About Us

As part of USL Group, Nufins has supplied materials to numerous projects since 1966 including power stations, water treatment schemes, ports, airfields, highways, bridges and tunnels. We take innovation seriously and we believe that this is necessary for a manufacturing company to prosper in our highly competitive industry. Nufins’ investments in our laboratory and production facilities have enabled the development of innovative products, thereby helping to improve effectiveness and efficiency on construction sites.

Nufins has a global reputation for manufacturing and supplying high quality specialist products for highway maintenance, waterproofing, structural grouting, joint-sealing, corrosion control, concrete repair and protective coatings for concrete structures. For further information visit our interactive website www.nufins.com.

Industry Accreditation

Nufins recognises the importance of membership to industry-affiliated specialist organisations, allowing us to keep in close contact with latest industry developments. We work in partnership with architects, consultants and contractors to improve product technology, quality and performance, thus benefiting all stakeholders in all aspects of the construction industry.

Materials are manufactured under the ISO 9001 Quality Management Scheme. All products for use in the repairs and protection of concrete structures are tested in accordance with BS EN 1504 and carry the CE label, thus providing Nufins’ customers with confidence in the quality and reliability of our specialist product range.
The performance of concrete as a construction material depends on a number of factors; its original quality, exposure conditions, design and the standard to which it has been applied, all have a bearing on its durability. All concrete will be subject to chemical and physical change. However one of the main causes of concrete failure is due to reinforcement corrosion. The following CE labelled materials can be used for repairs to improve the alkalinity of the damaged areas;

**Repair Mortars**

**Nucem Primer**

A cementitious epoxy blend, with long tack free time, designed to promote extremely high bond strengths. Recognised as one of the best available, the epoxy primer system can be used in wet or dry conditions. In addition, **Nucem Primer** protects reinforcement against further corrosion even under the most adverse conditions.

**Nucem HB Mortar/Acropak HB40 Mortar**

Polymer modified, shrinkage compensated, fibre reinforced, cementitious mortars with high build characteristics for vertical and inverted surfaces without the need for shuttering. Polymers reduce damage from CO₂, ingress of water, chlorides and certain sulphates. Nylon fibres reduce shrinkage cracking, make the mortar easier to apply and greatly increases the flexural strength of the system. Complies with BD27/86 Clause 6.

**Nucem Concrete/ Nucem Mortar**

Prepacked polymer modified systems which contain specially graded aggregates for high strength and abrasion resistance on decks. Excellent resistance to water, frost and salt permeability enabling these products to be used for heavy duty repairs under the most adverse conditions. Suitable for next day waterproofing. Complies with BD27/86 Clause 6.

**Deck Repair Rapid**

**Deck Repair Rapid** is characterised but its early high strength development, rapid moisture loss and shrinkage compensation. Designed for quick, easy installation and suitable for next day waterproofing of bridge decks and areas where rapid turnaround is important. Complies with BD27/86 Clause 6.
Protective Coatings

Nucem Skim Coat

A blend of high grade cements, fine aggregates and acrylic resin designed to produce a flexible levelling coat to cover areas repaired and existing concrete. **Nucem Skim Coat** gives an overall uniform appearance or a consistent surface to receive protective coatings. Polymer modified, capable of bridging hairline cracks and ideal for treating areas with low reinforcement cover. Tested by Taywood.

Proflex ‘A’

Flexible, anti-carbonation coating. A high build acrylic emulsion designed to protect concrete from the ingress of rain water and air-borne pollutants, while allowing substrates to breathe. Also suitable for protection and decoration of a wide range of wall and sheet roofing materials. Tested by Taywood.

Covercrete

Highly durable weather-resistant anti-carbonation coating. This water-based acrylic emulsion is designed to significantly reduce the diffusion rate of Carbon Dioxide and protect from chloride attack. Available in a range of decorative colours. Tested by Taywood.

Nucryl

An effective clear anti-carbonation coating. Solvent borne Acrylic treatment with excellent resistance properties that provides a long-lasting barrier to protect against Carbon Dioxide, for the protection of substrates from aggressive atmospheric contaminants.
**Technical Specification**

For high strength horizontal repairs
**Nucem Mortar/Concrete/Deck Repair Rapid**

For vertical or inverted repairs
**Acropak HB40 Mortar / Nucem HB Mortar**

**Proflex ‘A’**

For blowholes or an overall 2mm-3mm levelling coat
**Nucem Skim Coat**

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**Typical Section Through Edge Beam**

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**Carbon Dioxide Diffusion Equivalents**

<table>
<thead>
<tr>
<th>Material</th>
<th>Equivalent to Concrete (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20mm of <strong>Nucem HB Mortar</strong></td>
<td>250mm</td>
</tr>
<tr>
<td>3mm of <strong>Nucem Skim Coat</strong></td>
<td>206mm</td>
</tr>
<tr>
<td>150µ of <strong>Covercrete</strong></td>
<td>520mm</td>
</tr>
<tr>
<td>268µ of <strong>Proflex A</strong></td>
<td>260mm</td>
</tr>
<tr>
<td>88µ of <strong>Nucryl</strong></td>
<td>1000mm</td>
</tr>
</tbody>
</table>

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**Water Vapour Diffusion Equivalents**

<table>
<thead>
<tr>
<th>Material</th>
<th>Equivalent to Concrete (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3mm of <strong>Nucem Skim Coat</strong></td>
<td>630mm</td>
</tr>
<tr>
<td>150µ of <strong>Covercrete</strong></td>
<td>300mm</td>
</tr>
<tr>
<td>268µ of <strong>Proflex A</strong></td>
<td>700mm</td>
</tr>
</tbody>
</table>

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(1) Nucem HB Mortar is 100 times less permeable than ordinary concrete. (Comparisons made against 30N/mm² Concrete).