Epoxy Primer

Damp Tolerable Pre-Primer for Porous Surfaces

Revision: 3.4 - 19th September 2024
Code: 901-P

INTRODUCTION

Newton Epoxy Primer is a two-part, solvent free, clear epoxy which is applied to damp and porous surfaces as a pre-primer prior to the application of Newton Epoxy DPM, a vapour barrier and primer for newly placed, or damp, concrete and screed.

The high quality, epoxy formulation allows for application onto damp surfaces, whilst the low-viscosity penetrates deep into porous substrates to effectively seal the surface ready for the main primer application.

Epoxy Primer is quick and simple to apply by brush or roller, and can be applied over cementitious screeds and concrete just 7 days after placement. It is also a key component of the Newton NewCoat System for delivering a hard-wearing and waterproof coating for internal flooring applications.

APPLICATION

PROPERTIES

H - Hardness and Durability; E - Elasticity and Flexibility; V - Vapour Resistivity; C - Curing and Drying; W - Working Time

PACKAGING

A & B components in two separate containers

COVERAGE

KEY BENEFITS

- Very damp-tolerable
- Can be applied to concrete and screed 7 days after placement
- Low viscosity
- Solvent free
- Excellent vapour barrier
- High-bond DPM that provides a barrier to vapour and to prevent osmotic blistering

METHOD OF APPLICATION

- Brush
- Short hair roller
- Squeegee (Application only, not finishing)

SUITABLE SUBSTRATE

Correctly formed, compacted and prepared:

- Concrete of at least 7 days old
- Screed of at least 7 days old

TYPICAL APPLICATIONS

Pre-priming of damp or porous concrete and screed prior to the application of DampSafe DPM.

- Car parks
- Warehousing and storage
- Garages
- Plant rooms

SYSTEMS

Epoxy Primer is a component of the **Newton NewCoat System**, a liquid-applied system for the sealing, coating and protection of exposed screed and concrete surfaces that are subject to mechanical and chemical wearing agents from above and dampness from below. It is also suitable for use as a damp tolerable pre-primer, prior to the application of Newton Epoxy DPM.

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Opening Hours:
Monday to Thursday 8:00am - 5:30pm
Friday 8:00am - 5:00pm

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TECHNICAL DATA

Features	Result	Units
Form – Two component	Low viscosity epoxy resin	
Colour	Clear	
Specific Gravity	1.05	
Weight (both components)	5.0	kg
Yield per kg	0.9	litres
Application rate - 1st coat	0.25 - 0.40 (depending on surface porosity)	kg/m²
Application rate - 2nd coat if DampSafe DPM not used	0.25	kg/m²
Shelf life	12	Months
Pot life @ 20°C & RH of 40%	15 to 20	Minutes
Minimum application temperature - substrate	+8 (and rising)	°C
Maximum application temperature - air	+30	°C
Service temperature	-15 to +50	°C
Odour	Ammonia smell when mixing	
VOC content	Below 100 g/litre	%

Drying*	8°C	10°C	15°C	20°C	25°C	Units
Inter-coat adhesion window	15-48	13-40	12-30	11-28	9-24	Hours
To not be adulterated by light rain**	8	8	7	6	5	Hours
To not be adulterated by heavy rain**	14	12	11	10	8	Hours
Ready for temporary foot traffic	16	14	14	12	10	Hours

Cured Performance	Result	Units	Test Method
Colour	Clear		
Membrane thickness***	0.18 - 0.23	mm	
Adhesion to concrete (>B2.0)	3.5	MPa	BS EN 13892-8
Water vapour transmission rate – UK Perm	0.097	g/m²/24 hrs	EN 1504-2
Water vapour diffusion resistance – S_d value	147.58	m	Calculated from UK Perm
Water vapour diffusion resistance – μ value	451656	μ	Calculated from UK Perm
Water vapour diffusion resistance	737.90	MNs/g	Calculated from UK Perm
Reaction to fire classification – Not determined	F		Euroclass

The above data, even if carried out according to regulated tests are indicative and they may change when specific site conditions vary. *Figures are influenced by humidity also and so are indicative. **The surface of the epoxy may be slightly blemished or slightly emulsified and may require a light mechanical sanding or wire brushing to remove this slight surface adulteration. The performance of the product is unaffected. ***Depending on substrate porosity.

ANCILLARY PRODUCTS

Newton Epoxy DPM

SPECIFICATION

Newton Waterproofing Systems work in partnership with RIBA NBS who publish our products on NBS Source. The platform integrates seamlessly into project workflows, providing all product data from Newton's NBS BIM Objects, NBS Plus Clauses and RIBA Product Selector into one single source of product information.

NBS Source also hosts a large selection of Newton case studies, as well as product literature and certifications. A wide range of drawings are available on our website.

SPECIALIST TOOLS REQUIRED

No specialist tools required.

LIFE EXPECTANCY

Life expectancy is equal to that of the surface it is applied to or the covering applied above.

TRAINING AND COMPETENCY OF THE USER

Epoxy Primer should only be used by those with an understanding and experience in the use of two-part resins applied to floors.

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PACKAGING

The product consists of two parts, A and B, both of which are measured and ready to be mixed:

- Part A (Tin of resin) 3.12 kg
- Part B (Tin of hardener) 1.88 kg

APPLICATION RATE

Thickness of 0.18 - 0.23 (180 - 230 microns), depending on substrate porosity, which requires an application rate of 0.28 to 0.4 kg/m^2.

COVERAGE

To grit blasted and textured surfaces, approximately 2.5 m^2 per kg per coat for the first coat and up to 5 m^2 per kg per coat for the second coat. Coverage will vary according to the texture, porosity and evenness of the surface to which Epoxy Primer is being applied.

CONSTRUCTION

The construction should conform with current Building Regulations, British Standards and relevant Codes of Practice. New concrete and screed must be at least 7 days old.

SURFACE PREPARATION - CONCRETE FLOORS

With both new and existing concrete surfaces, the surface should be ground with floor grinding machines to remove laitance. Vacuum clean after grinding. All surface cracks should be repaired and filled.

In all cases the surface must be clean, and free from dust, laitance, oils, paints or other forms of contamination. Large holes or indentations should be filled with Newton Hydro 203-RM.

SURFACE PREPARATION - SCREEDS

Surface laitance should be removed by light sanding with a suitable pad or disc. All dust must be removed by vacuum.

Epoxy Primer may be applied to screeds with a moisture level of less than 87% RH. If the moisture level in the screed is above this, further drying must be carried out according to the manufacturer's instructions.

MIXING

Newton Waterproofing supply the full range of Collomix Mixing Equipment that includes Hand Mixers, Stirrers, Mixing Stands, Buckets, Transport Carts and the Mixer Clean mixing bucket.

Epoxy Primer can be mixed with the LX 90 stirrers, matched to the Xo 1 Hand Mixers. A Low-speed drill can also be used.

- Place the hardener (Part B) into the resin (Part A). Scrape the bottom and sides to that all of the hardener is placed into the resin
- Mix for two minutes using the LX 90 stirrer

APPLICATION

The surface which the Epoxy Primer is being applied onto can be damp but must be free from standing water. For calcium sulphate screeds, ensure the % RH is below 87.

Apply with roller of brush to a consistent thickness to give an even and smooth finish.

For best results, pour the mixed product onto the substrate in small quantities and quickly roller it out.

Alternatively, a squeegee can be used to place the product.

- Pour mixed material evenly within marked bays
- Use a squeegee to evenly distribute the product material over the specified area
- Check thickness with a wet film gauge
- Use a roller to ensure an even finish
- Brushes can be used for detailing

Wet film gauges are available by request.

DRYING TIMES

For curing/drying times please see Technical Data Table on page 2.

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POT LIFE & WORKING TIME

Epoxy Primer has a working time of 30 minutes but a pot life of only 15-20 minutes. If the product is not used within 20 minutes, decant to smaller tins.

WARNING: Mixing of the hardener with the resin results in an exothermic chemical reaction. Leaving too much product in the tin for too long will result in the product and the tin becoming very hot.

NOTE: Although exothermic reaction is the main determinant of pot life, temperature will also have an effect, with the pot life reducing further in warmer and hotter conditions.

NUMBER OF COATS REQUIRED

Only one coat of Epoxy Primer is required to seal or consolidate the surface ready for application of the Epoxy DPM.

CLEANING

Wipe excess product from tools and equipment with a rag and then clean with xylene.

Hardened product can only be removed mechanically.

OVER-COATING

Application of Epoxy Primer should be at 90° to the first coat and must be carried out within the inter-coat adhesion window confirmed on page 2.

If it is not possible to apply the Epoxy Primer within that window, a mechanical key is required. This can be achieved by lightly abrading the surface of the Epoxy Primer. Please bear this in mind when planning the project.

If two coats of Epoxy Primer have been applied, the coating to be applied above the primer must also be applied within the inter-coat adhesion window. If this is not achieved, abrading or 100% broadcasting with kiln-dried sand, to create a mechanical key, will be required.

LIMITATIONS

The product is seasonal and it is unlikely that two full working days will be warm enough or dry enough for successful external application during December, January and February. Careful planning and some luck with the weather may allow for use in November, March and April.

Regardless of the time of year, do not apply prior to rain - please see information within the curing table on page 2.

Internal spaces may be space-heated to ensure the correct working temperature is achieved.

- Minimum substrate temperature must be of 8° C and rising
- Do not apply at temperatures higher than +30° C
- Do not apply if rain, mist, fog or cold weather are expected the day after application

WARNINGS

- Monitor the product in the tin to ensure it is not overheating
- Do not leave the tin upside down on the substrate

COLOUR

Clear.

STORAGE

Store in dry conditions at temperatures between 10° C and 30°C with containers fully sealed. Do not expose to freezing conditions.

If these conditions are maintained and the product packaging is unopened, then a shelf life of up to 12 months can be expected.

HEALTH & SAFETY

Product should only be used as directed. The Material Safety Data Sheet (SDS) should be carefully read prior to application of the material.

The SDS is available upon request from Newton Waterproofing or online via our web site. Please see contact details below.

Use appropriate PPE for the environment the system is installed within. Use products only as stated within this Data Sheet and SDS.

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CE 20	JN NEWTON WATERPROOFING	Newton Waterproofing Systems Newton House 17-20 Sovereign Way Tonbridge Kent TN9 1RH	901-P EN 13813:2002 Two component moisture tolerant epoxy resin primer. According to EN 13813: SR-B2.0

Essential characteristics	Declared performance	Test standard	Harmonised Technical Standard
Release of corrosive substances	SR	(EN 13813, 5.3.5)	EN 13813:2002
Water permeability	NPD		
Wear resistance	NPD	EN 13892-4	
Bond strength	>B2.0	EN 13892-8	
Impact resistance	>IR10	EN ISO 6272	
Reaction to fire	NPD		
Sound absorption	NPD		
Thermal resistance	NPD		
Chemical resistance	NPD		

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