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ES100

One Coat Universal DPM

KEY BENEFITS SUMMARY

- Suppresses residual constructional moisture in concrete and sand/cement floors
- Provides a guaranteed surface damp proof membrane which is pinhole resistant
- Allows the early laying of floor coverings to sand/cement and concrete bases where moisture content is in excess of 75% RH
- Guarantees the satisfactory laying of all floor coverings in the above conditions
- Hygrometer readings of up to 97% RH (measurable) can be accommodated (99.9% theoretical)
- Easy to apply - Low viscosity
- Very cost effective single coat application reducing time on site
- Approved by major floor covering manufacturers
- The unique Tremco application method (trowel and roller) assists in obtaining the correct coating thickness
- Suitable for heated concrete and sand cement screeds (provided the surface temperature does not exceed 27 deg C in accordance with BS 8203 and BS 5325)

PRODUCT INFORMATION

Description
Tremco ES100 One Coat Universal DPM is a two part, epoxy based damp proof membrane.

Usage / Purpose
Tremco ES100 One Coat Universal DPM has been developed specifically for suppressing residual moisture in concrete and sand/cement subfloors and provides a guaranteed surface damp proof membrane with a single coat liquid application.

Colour
When mixed: Slate Grey
Part 1: Black
Part 2: Off-White

Packaging
Tremco ES100 One Coat Universal DPM is supplied in units of 10 kg.

Availability
Direct from Tremco illbruck (see back of leaflet for address and telephone details) or via local and national distributors.

TECHNICAL INFORMATION

Composition
Tremco ES100 One Coat Universal DPM is a flexibilised epoxy, which contains wetting aids and penetrants to maximise adhesion, flow control agents to minimise pinholes and overlapping platelets which provide an extra barrier to moisture vapour.

Performance (Typical Values)
MIXING RATIO
3.4:1 by weight

WORKING POT LIFE
+20°C: 1 hour 25 minutes
+15°C: 2 hours
+10°C: 2 hours 30 minutes

HARDENING TIME
+20°C: 5 to 6 hours
+15°C: 8 to 11 hours
+10°C: 14 to 20 hours

SERVICE TEMPERATURE RANGE
-20°C to +80°C

WATER RESISTANCE
Excellent

CHEMICAL RESISTANCE
Good

USAGE GUIDELINES

Standards
All aspects of the installation must be in accordance with the requirements of BS8204, BS8203 (Installation of Resilient floorcoverings) or BS5325 (Installation of Textile floorcoverings) and supplementary specifications.

Moisture Testing
(in accordance with British Standards 8203)

- Hygrometer readings must be taken and recorded so that the correct Tremco ES100 One Coat Universal DPM system can be selected.
- The sealing effect of concrete curing compounds and over-trowelled concrete will extend the time taken for the hygrometer to reach equilibrium.
- Subfloor measurement readings of up to 97% RH (measurable) can be accommodated with the system (99.9% theoretically).

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Conditioning

- Condition the contents by storing for 24 hours at +15°C to +25°C as cooler temperatures will increase viscosity and make application more difficult. Higher temperatures will speed the chemical reaction and therefore reduce working pot life.

Surface Preparation

- The surface must be firm, sound, clean, dry and free of any other contaminants liable to prevent penetration into the substrate or adhesion to the surface.

N.B. Concrete curing agents and admixtures and the misuse of these products can impair adhesion. Where doubt exists, or compatibility is unknown, a trial adhesion test with Tremco ES100 One Coat Universal DPM should be carried out and the Technical Department must be consulted.

- Remove all surface dust, etc., by industrial vacuum cleaning. Machine scarifying or shot blasting will be necessary for removal of incompatible curing agents, admixtures or other stubborn surface contamination. Shot blasting is also recommended on lightly polished surfaces.

Mixing

Tremco ES100 One Coat Universal DPM hardens by a chemical reaction. It is essential that the mixing instructions are strictly adhered to:

- Stir Part 1 and Part 2 thoroughly before transferring Part 2 into the Part 1 container.
- Using a slow speed drill fitted with a Tremco two bladed propellor (NOT A CEMENT PADDLE), mix the contents for 4-5 minutes to obtain uniformity in colour and consistency. Ensure all materials from the base and sides of the containers are mixed in thoroughly to ensure a uniform cure.
- Do not mix more 10 kg units than can be used within the working pot life.

Method of Application

- Tremco ES100 One Coat Universal DPM is so easy to apply that it could be over extended; therefore, measure out areas of 24 m^2 (up to 92% RH) or 20 m^2 (up to 97%) to ensure correct coverage for a 1 x 10 kg unit and to give the correct coating thickness of approximately 250-350 microns (dependent on system selected).
- A practical coverage of approximately 20 m^2 - 24 m^2 per 10 kg unit is expected, dependent on application and porosity of the concrete subfloor.
- Apply the mixed Tremco ES100 One Coat Universal DPM by means of a 2 mm x 5 mm notched trowel. While the Tremco ES100 One Coat Universal DPM is still wet, flatten out the serration ridges with a long handled 'fluff free' roller, initially pre-wetted in the Tremco ES100 One Coat Universal DPM . Replace or re-notch worn trowels to ensure that the correct thickness of Tremco ES100 One Coat Universal DPM is maintained.
- The thickness must be no less than 250-350 microns in order to ensure that excess moisture vapour will not permeate the membrane.
- It is essential that the applied coating is continuous and free of pinholes or thin patches, otherwise an additional patching coat will be necessary.
- Allow to cure for 8 to 10 hours at +15°C .
- Check that the correct number of units were used on the area coated.

Typical Specifications

System TR1 (75 to 92% RH)

1. Apply an even, continuous coat of mixed Tremco ES100 One Coat Universal DPM to a minimum thickness of 250 microns as per application instructions and allow to cure for 8-10 hours.
2. Apply Tremco SX300 Unitex NA latex underlayment to a thickness of 3 to 6 mm to the cured Tremco ES100 One Coat Universal DPM as per the product data sheet.

System TR2 (75 to 97% RH) (99.9% RH theoretically)

1. Apply an even, continuous coat of mixed Tremco ES100 One Coat Universal DPM to a minimum thickness of 350 microns as per application instructions and allow to cure for 8 to 10 hours.
2. Apply Tremco SX300 Unitex NA latex underlayment to a thickness of 3 to 6 mm to the cured Tremco ES100 One Coat Universal DPM as per the product data sheet.
3. Secure the floorcovering with the approved Tremco adhesive.

System TR3 (Existing substrates with no damp proof membrane)
Moisture content of up to 97% RH (99.9% RH theoretically):

1. Prepare the base as before and apply the Tremco ES100 One Coat Universal DPM as System TR2. If the existing concrete/sand cement subfloor is not sufficiently smooth, apply Tremco SX300 Unitex NA latex underlayment prior to the application of the Tremco ES100 One Coat Universal DPM. Residues of old adhesive and underlayments must be removed mechanically then proceed as per specification. Tremco SF600 Multi-Purpose Polyurethane Adhesive can be applied directly to Tremco ES100 One Coat Universal DPM when Tremco SX300 Unitex NA latex has been used to pre-smooth the substrate. Contact Tremco illbruck's Technical Department for free advice.

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System TR4 (Sandwich damp proof membrane and bonding agent)

1. Prepare base as before.
2. Apply an even, continuous coat of mixed Tremco ES100 One Coat Universal DPM with a Tremco long handled 'fluff free' roller to a minimum thickness of 250 microns as per application instructions and allow to cure for 8-10 hours.
3. Apply a second coat of Tremco ES100 One Coat Universal DPM as before, applied at right angles to the first coat and whilst still in the tacky state, blind with limestone aggregate and allow to dry completely. Once dry, remove any loose aggregate.
4. Apply a quick dry screed of suitable thickness, slurry bonded into the second blinded coat of Tremco ES100 One Coat Universal DPM

NOTE:
Always ask for a written specification.

System TR5 (75 to 97% RH) (99.9% RH theoretically) Underfloor heating

1. Prepare the base as before and ensure the underfloor heating system has been commissioned for a minimum 7days (refer to BS EN 1264 Part 4 and BS 8204 Part 1). In all cases the underfloor heating system should be switched off for two days prior to and two days after installation of the flooring products and floor covering. The system should be recommissioned gradually to avoid rapid temperature variation.
2. Apply an even, continuous coat of mixed Tremco ES100 One Coat Universal DPM to a minimum thickness of 350 microns as per application instructions and allow to cure for 8 to 10 hours.
3. Apply Tremco CS100 Epoxy Primer in accordance with the product data sheet.
4. Apply Tremco smoothing compound to a thickness of 3 to 6 mm to the cured Tremco CS100 Epoxy Primer as per the product data sheet.
5. Secure the floorcovering with the approved Tremco adhesive.

Application Notes

1. Important! Tremco SX300 Unitex NA must be applied within 24 hours (@ 15°C) following the application of Tremco ES100 One Coat Universal DPM. Higher temperatures will reduce the overcoat window (Please refer to our Technical Department in this instance). Tremco CS100 Epoxy Primer must be used with Tremco SX200 Unismooth Px-2 & Tremco SX301 Unispec.
   Site overshoes are recommended to prevent contamination of the Surface DPM /Primer system.
2. Where there is underfloor heating, Tremco CS100 Epoxy Primer is always recommended before applying any Tremco smoothing compound. (Always ask for a written specification).
3. Specification Service: The above Systems are given as a general guide only. Always consult Tremco illbruck's Technical Department who will submit a written specification, tailor-made to suit specific job requirements, complete with the recommended adhesives for the floor coverings.
4. Subfloors of terrazzo and quarry tiles can be accommodated by a modification of the TR4 System. Refer to the Technical Department.
5. Structural Joints/Crack Inducement Joints: Structural joints must not be bridged with Tremco ES100 One Coat Universal DPM. These must be sealed with a suitable, impervious flexible jointing compound after the Tremco ES100 One Coat Universal DPM has been applied and covered with an expansion joint cover strip at the surface. Any other joints in the concrete base, where differential movement is anticipated, should be treated in the same way.
6. Any of the Tremco self levelling underlayments can be used in place of the Tremco SX300 Unitex NA latex on top of the Tremco ES100 One Coat Universal DPM providing Tremco CS100 Epoxy Primer is always used. Always Contact the Tremco illbruck's Technical Department for advice and amended specification.

Coverage Rate

Approximatley 20 m² to 24 m², practically, dependent on method of application and condition of substrate to give a dry film thickness of approximately 250-350 microns per coat.

Cleaning

Clean tools, etc., with Tremco AW421 Heavy Duty Cleaner (flammable).

Health & Safety Precautions

Product Health and Safety Data Sheets must be read and understood before use.

Storage

- Store between +5°C and +30°C.
- Rotate stock using old material first.

Shelf Life

6 months when stored in its original unopened containers.

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Technical Service

Tremco illbruck has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 01942 251400.

Guarantee / Warranty

Tremco illbruck products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco illbruck written instructions and (b) in any application recommended by Tremco illbruck, but which is proved to be defective, will be replaced free of charge.

No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.

Tremco illbruck Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.