



Proteus

Waterproofing



COLD MELT[®] DPM PRIMER

Damp Proof Membrane



As part of Proteus Cold Melt[®] System

Designed to waterproof
green concrete after 3 days

Cold Melt® DPM is a liquid applied damp proof membrane that can be applied to wet or damp concrete and polymer screeds after three days.

Designed to waterproof green concrete after 3 days

Because of its low vapour permeability, combined with a low liquid water transmission rate, moisture passage or escape through the Cold Melt® DPM protected surface is prevented.

Cold Melt® DPM can be applied to wet/damp concrete or polymer screeds with Hygrometer readings up to 98%RH as measured in accordance with BS8203 can be accommodated.

While conventional wisdom suggests that a waterproof membrane should not be applied to green concrete for at least 28 days, Cold Melt® DPM Primer is so advanced that it actually works with the concrete deck to help deliver maximum performance.

Understanding the curing process

When concrete is mixed, all the water needed for full hydration is present in the mix design. Often contractors add more to the concrete than is needed for hydration, to make the concrete more workable. This extra water is called “water of convenience” and causes the cement particles to be too far apart to knit together into a strong matrix. It results in a longer set time and lower strength.

Excess water will dissipate downwards or out through the sides/open ends of the structure over a period of time. If a metal tray/deck is in place directly under the concrete, this will slow excess water escaping the structure. Metal tray/deck joints, sides and fixing holes will still allow moisture passage and the drying of the structure.

While 28 days is generally regarded as the length of time for concrete to dry satisfactorily for adequate strength to use / overlay, typically moisture will still be present in the structure and hydration will continue. The longer this hydration continues the stronger concrete becomes. Once all the moisture has been used up the concrete will stop strengthening further. Therefore the longer moisture is held within the structure the more it allows Hydration to increase the strength of the concrete.

Importantly it is only excess water in the mix which will require an escape from the structure. Therefore, as long as the mix is correct the need to allow water an escape is minimal or not required.





What is hydration?

Adding water to Portland cement starts a chemical reaction called hydration. As hydration proceeds over time, the Portland cement and water are transformed into beneficial calcium silicate hydrate compounds. These compounds are the glue that holds the aggregates together, creating the hard, solid material we know as concrete. There are other compounds that form during the hydration process, but they are not responsible for strength.

Curing is the process of maintaining moisture levels inside cast concrete so that hydration can continue. As long as free moisture and unhydrated cement exist inside the concrete, the strength, hardness and density will gradually increase. Practically speaking, curing is simply the process of keeping the hardened concrete moist so that it can continue to gain strength.

As the concrete gets stronger and denser, its porosity decreases. This is important, because early on the concrete is much more porous than when it's older and has hydrated longer. Porous concrete loses moisture to evaporation quickly, and this can lower internal moisture levels and stop hydration. If the concrete dries out, it stops gaining strength, which is why it is important to cover concrete right after casting to keep it moist.

Compatible with all types of membrane

When used with the Proteus Cold Melt® System, the DPM is BBA certified as a named component within the System and is accredited to last for the lifetime of the building on which it is installed. The DPM can also be used in conjunction with a wide range of other types of Proteus waterproof membranes. Please contact our technical department for further details.

Cold Melt® DPM Primer - the technical details

The Cold Melt® DPM resin system has been tested under BSEN1504-2 for adherence to damp concrete and polymer screeds, with Hygrometer readings up to 98%RH as measured in accordance with BS8203 can be accommodated.

Testing for adhesion to damp concrete in accordance to BSEN 1504-2 requires:

Excellent adhesion >1.5kg/MPa

Table 5 BSEN1504-2 Mean adhesive strength >1.5kg/MPa

Low moisture vapour permeability rate.

Table 5 BSEN1504-2 water vapour permeability as ClassIII, $s_d > 50$ metres

Low liquid water transmission rate.

Table 5 BSEN1504-2 liquid water transmission rate to be < 0.1kg/m²h^{0.5}

The performance of the Cold Melt® DPM resin with its low vapour permeability rate combined with the low liquid water transmission rate and high adhesive strength demonstrates a Failure Free application track record.

Call us now on 01268 777871 to find out why Cold Melt® DPM Primer is the perfect waterproofing solution for your roof refurbishment.



Proteus Waterproofing

Manufactured in the UK and Europe, Proteus Waterproofing is one of the most innovative, fast growing companies in the waterproofing market. Proteus Waterproofing is a single source supplier, with an array of hot and cold-applied waterproofing and protection systems. The company's comprehensive product range is suitable for high performance roofing, balconies, walkways and car parks. It offers a vast range of systems, that have been engineered to meet the harshest of weather conditions and provide a lasting and robust waterproofing solution, in both refurbishments and new builds.

Experts in all forms of liquid applied and bituminous membrane roofing and waterproofing. Proteus Waterproofing is adaptable to each client's individual needs and circumstances, and offers long-term performance product reliability and a simple installation as standard.

Total Peace of Mind

Proteus Waterproofing roofing systems are tested to the most rigorous international standards, ensuring they will outperform the initial design life. This will give your project a durable, reliable and long-lasting waterproofing finish, that will last for many years to come, providing excellent value to clients and building owners.

Guaranteed Performance

Proteus Waterproofing presents clients with a robust choice of guarantees for its bespoke systems, from an offer that also incorporates enhanced independently-backed warranties, for total peace of mind.

For further information, please contact Proteus Waterproofing to discuss the most suitable option to meet your requirements.



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Proteus' range of lasting and robust systems includes:

- *Liquid-applied waterproofing: Proteus Pro-System® Plus*
- *Inverted roof waterproofing: Cold Melt®, Proteus Hot Melt®*
- *High performance felts: Proteus Pro-Felt®, Ultima, Ultima Plus, Endura*
- *Balconies and walkways: Pro-BW®*
- *Car park decking systems: Deckmaster*
- *Coating protection: Pro-Cryl®, Pro-Solar Reflect*
- *Exterior walls waterproofing: Monodex, Textured Monosil*

The Proteus Waterproofing Specification includes:

- *On-going technical support*
- *Comprehensive guarantees*
- *Free roof evaluations service*
- *Roof condition surveys, reports and bespoke specifications*
- *Expert advice on low maintenance solutions*
- *Site survey and design stage involvement*
- *Thermal value calculations to building regulations part 'L'*
- *Tapered insulation scheme design*
- *Wind uplift calculation*
- *Building regulations Part B (fire) compliance options*

The Proteus Waterproofing service package includes:

- *Detailed specifications*
- *National contractor base*
- *Technical manager inspections throughout the project*
- *Installation sign off*