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KEMPEROL
Cold applied liquid waterproofing

KEMPEROL 2K-PUR
solvent-free liquid-applied waterproofing

TECHNICAL DATA SHEET

Description

Kemperol 2K-PUR is the only wet-on-wet, solvent free liquid waterproofing system in the UK, and is suitable for use in applications where solvent-based products would be disruptive. A two-component, polyurethane-based product, it forms a permanently elastic, seamless, yet highly permeable membrane that is both durable and tear-resistant.

It can be used with Kemperdur TC as part of a completely solvent-free waterproofing and surfacing system. Both of these products incorporate a high proportion of resin from renewable resources.

Uses and Applications

2K-PUR can be used on a wide range of applications, offering the strength and versatility of solvent-based products but with the advantage of a more environmentally-friendly composition. It is particularly suitable for use on occupied buildings that would be sensitive to a solvent-based application, such as schools, hospitals or food factories, allowing remedial work to take place without the need for evacuation or closure.

- Sensitive areas such as schools, public places and food manufacturing plants
- Roofs
- Balconies, terraces and podiums
- Walkways
- Fountains
- Floors of boiler rooms/control rooms
- Gutters
- Applications where policies favour the use of environmentally friendly products

Advantages

- Applied exclusively by trained and approved contractors
- Solvent-free
- Fully reinforced
- Excellent elasticity and tensile strength
- Fully bonds to substrate
- Seamless
- UV stable
- Vapour permeable
- Cold-applied liquid polymer

Performance

- Highly durable and long-lasting
- Weather resistant after 2 hours
- Suitable for maintenance foot traffic without further protection

Approvals and Authority

British Board of Agrément Certificate No 06/4338
European Technical Approval Certificate No ETA-03/0044
EXT.F.AA fire rating to BS476 Part 3: 1958

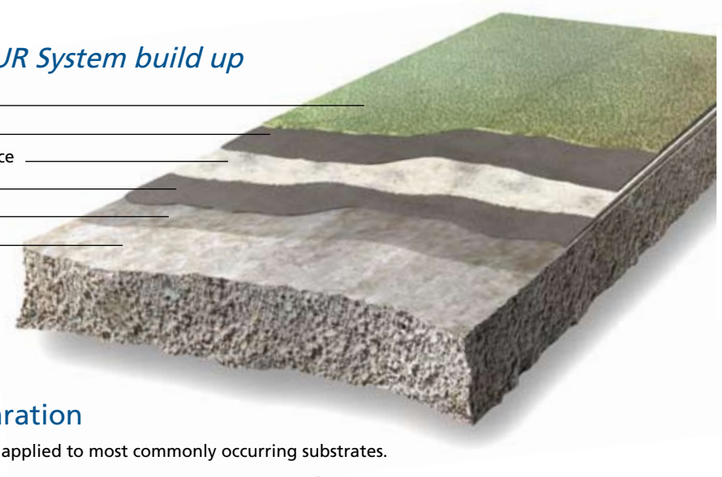
KEMPER SYSTEM

KEMPEROL 2K-PUR

System information and application

The Kemperol 2K-PUR system comprises a two-component polyurethane resin applied onto a primer and reinforced with a polyester fleece. Optional decorative wearing courses can be applied.

Kemperol 2K-PUR System build up



Substrate preparation

Kemperol 2K-PUR can be applied to most commonly occurring substrates.

Kemperol 2K-PUR must be applied in accordance with the manufacturer's instructions.

Substrates to which the coating is to be applied must be dry, clean and free from loose particles, paint, grease and oil or other contaminants which may affect the adhesion of the system. Substrates should also be free from physical defects and provide a continuous supporting surface for Kemperol application. On refurbishment projects consideration should be made as to any degradation of the existing roof components. This product is designed to bridge cracks up to 2mm, anything larger should be filled prior to waterproofing. Any peak greater than 2mm or sharp aggregate should be prepared by levelling off or flattened by mechanically abrading.

The substrate should be primed with the appropriate primer, in accordance with the manufacturer's instructions. When overlaying existing waterproofing it is preferred to cut back that old system at the perimeter detailing and allow the Kemperol to bond directly to the base substrate. This will maximise the long-term integrity of the new system.

Preparation requirements for common substrates

Bituminous sheet

Remove loose chipping where applicable. Cut back to base badly cracked and defective areas of felt. Star cut blisters, dry out and re-bond. At upstands, remove or temporarily pin back the lead flashing, and check the existing system for integrity. Ideally the existing upstand should be removed and the underlying substrate prepared to accept the Kemperol Primer. Voids greater than 2mm should be filled prior to the application of the system.

Weathered asphalt

Where applicable remove chippings or promenade tiles. Any blisters or defects in the asphalt should be cut out and filled to give a sound supporting substrate. Any voids greater than 2mm should be filled prior to the application of the system. Remove the existing asphalt upstands. Prepare as required to fill any voids and clean the newly exposed substrate ready for priming. All areas should be swept or power washed to remove any contamination that could impair system adhesion.

Concrete/screed

New cement-based surfaces should be fully cured and over 28 days old. Surfaces should be dry, with a moisture content of less than 5%. Surface should be free from friable material, laitance or any contamination to allow suitable adhesion of the waterproofing system. Uneven concrete with peaks or voids greater than 2mm can either be levelled with an approved material or mechanically prepared to give the required finish.

PVC sheet

Use proprietary approved cleaning solutions as required. Once clean and dry, prime the surface in preparation for Kemper 2K-PUR waterproofing.

TPO sheet

Kemperol 2K-PUR may be used on TPO sheet when used with Kemperol FPO Primer.

Brickwork, stonework

Fill mortar joints level. Mechanical abrading of the surface is required on engineering bricks or smooth-faced bricks to improve adhesion at perimeter details.

Glazed tiles

Mechanically abrade or grind the surface.

Copper

Mechanical abrading of the surface will enhance adhesion. Use proprietary degreaser or Kemperol MEK universal cleaner to degrease the surface.

Lead

Mechanically abrade the surface to enhance adhesion at perimeter details. Use proprietary degreaser or Kemperol MEK universal cleaner to degrease the surface. Existing lead flashing should be pinned back and secured during application of the Kemperol system.

Exterior grade plywood

During installation allow suitable gaps between boards to allow for expansion/contraction. Install to manufacturer's recommendations. All joints and perimeter edges should be treated with 75mm wide Kempertherm joint fleece during the priming operation (or Kempertherm aluminium joint tape after priming) to prevent the loss of waterproofing resin between the boards.

Stratex insulation board

All joints should be treated with 75mm wide Kempertherm joint fleece during priming (or Kempertherm aluminium joint tape after priming). Perimeter edges should also be sealed.

Aluminium, zinc

Mechanical abrading of the surface will enhance adhesion. Use proprietary degreaser or Kemperol MEK universal cleaner to degrease the surface.

New galvanised metal

Pre-treat with Mordant Solution (T-Wash) prior to priming with the Kempertec primer.

Priming

Primers are applied by brush or roller to seal the substrate prior to application of the Kemperol 2K-PUR resin. The coverage rate for the primer will depend upon the type of primer and the porosity and surface profile of the substrate.

Kemper System have a range of primers for maximising the bond potential to a wide range of substrates under different conditions. Since adhesion is an important aspect to system integrity, please refer to our technical department for advice on a specific situation.

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Waterproofing

Prior to application to the main roof area, any protrusions and upstands are to receive the waterproofing resin and fleece first. Refer to Kemper System standard details for further guidance on methodology.

The mixed Kemperol 2K-PUR resin is applied by roller at a coverage rate of 3.0 kg/m² with Kemperol 165 Fleece. Coverage will vary slightly depending on the complexity of details.

Two-thirds of the resin is applied first and the Kemperol Fleece is embedded and saturated. The remaining one-third of the resin is applied while the first application is still wet. All fleece sections should overlap by 50mm (min.) with a minimum150mm upstand height where possible. Apply waterproofing so as to complement any cavity tray or other waterproofing interface detail.

Kemperol 2K-PUR may also be used with Kemperol 120 and 200 reinforcement fleeces and the minimum resin coverage rate for these is 2.5kg/m² and 3.4 kg/m² respectively.

The system is rainproof after 2 hours and can be walked on after 16 hours at 20 °C. The curing time will reduce at higher temperatures and increase at lower temperatures. If ambient temperatures are below 10°C or a faster curing time is required then add Kemperol 2K-PUR Accelerator. Using Accelerator above 10°C will reduce the working time as well as the cure time.

If the application is interrupted more than 24 hours, but before 7 days, wipe the overlap or area to be coated with Kemperol MEK Cleaning Agent. After 7 days, abrade the surface of the overlap area to achieve optimum bond. These measures should be carried out when overlapping or applying a further coating including Kemperdur TC or a bonding layer.

Work must not be carried out if rain is imminent and the ambient temperature at the time of application must be between 5°C and 35°C. The temperature of the substrate should be at least 3°C above the dew point. Relative humidity should be below 85%.

Decorative wearing course

Kemperdur AC and solvent-free TC are hard-wearing surfacings that can be applied over the Kemperol membrane, providing additional protection and allowing colour options to be considered. Other materials can be used for hard landscaping applications, including paving slabs on spacers, paving tiles fully bedded and timber decking on bearers. Kemperol 2K-PUR may be overlaid with hot rolled asphalt. After a curing period of 2 days Kemperol 2K-PUR can handle temperature of poured asphalt up to 250°C.

Installation

Kemperol waterproofing and surfacing products are only installed by approved, fully trained contractors.

Accessories

A full range of tools and accessories is also available.

Technical support

For additional technical information and advice, please contact our technical department on 01925 445532 or visit www.kempersystem.co.uk

KEMPEROL 2K-PUR

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System component	Pack size options
Kemperol 2K-PUR (parts A and B) standard colour – Anthracite RAL 7016 ** box of sachets available upon request*	5kg (2 x 2.5kg) 10kg (10 x 1kg)* 12.5kg
Kemperol 2K-PUR Accelerator Tin	40gm 80gm
Kemperol 200, 165 or 120 Fleece	50m x 26.25cm 50m x 52.5cm 50m x 70cm 50m x 105cm
Kemperol 200 or 165 Fleece	50m x 35cm
Kemperol 165 Fleece	50m x 10.5cm 50m x 21cm
Kemperol 120 Fleece	25m x 26.25cm
Kempertec D - Primer	1kg, 2.5kg, 5kg
Kempertec R Primer	1kg
Kempertec FPO Primer	0.5kg, 1Kg, 3kg
Kempertec EP Primer	3kg, 10kg
Kempertec EP5 Primer	3kg, 10kg
MEK cleaning agent	2kg, 9kg

General information

The colour of the finished product may alter according to temperature and/or UV-radiation, however its performance remains unaffected. The times given are reduced with higher and increased with lower surrounding and work surface temperatures. We guarantee the consistent high quality of our products.

Kemper System products must not be mixed with other manufacturers' products.

Every effort has been made to ensure the information provided on this datasheet is correct. It is intended for general guidance only and it is the responsibility of the user to confirm product suitability – more detailed and specific advice may be obtained from our technical department or from an approved contractor.

The correct application of our products is the responsibility of the appointed contractor.

Our products are sold exclusively on the basis of our conditions of sale and delivery.

This technical information supersedes and renders invalid all previous editions.

KEMPER SYSTEM

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