Method Statement

Ref. #: DCP01/08-0130-A-2024

DualProof T

(Composite Waterproofing Membrane)

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Section A: General Comments

General Notes:

The information below is a detailed overview of the application of DCP's **DualProof T** waterproofing system and should be read in conjunction with the relevant technical data sheet prior to application. All DCP Products should be applied by experienced specialist contractors.

Ensure that the blinding concrete layer is laid smoothly without any unevenness. And that the bricks are laid with plaster applied to a level higher than the raft foundation.

Care should be taken when using vibrating equipment to prevent damage to the installed Waterproofing System.

All surfaces onto which the **DualProof T** Membrane is to be applied should be sound, solid and free from gaps or voids that are greater than 12 mm. All corners, up-stands, pipe/service penetrations, etc. must be detailed correctly prior to the application of the membrane.

All the points below assume correct preparation of the relevant surface.

Tools and Equipment:

It is suggested that the following list of equipment are adopted as a minimum requirement

Personal protection	:	*Protective overalls*
	:	*Goggles or a face mask*
	:	*Good quality gloves*
	:	*Safety shoes*
	:	*Safety helmet*
Equipment	:	*Manual hot-air blower (Fig.1)*
	:	*Utility knife with blade (Fig.2)*
	:	*Pressure roller (Fig.3)*
	:	*Nail Gun + Nails (2.7 cm) (Fig.4)*
	:	*Steel washers (Fig.5)*

Fig.1: Manual hot-air blower

Fig.2: Utility knife with blade

Fig.3: Pressure roller

Fig.4: Nail Gun

Fig.5: Steel washers

Section B: Application

1.0 Substrate Preparation

1.1 All substrates onto which **DualProof T** membrane is to be installed should be flat and free from sharp objects and voids that are greater than 12 mm should be repaired. Lean-mix concrete or compacted sands are suitable base substrates.

1.2 Detailing of all critical points i.e. Up-stands, penetrations, ground anchors, pile caps, etc., must be completed before installing the primary waterproofing membrane.

2.0 Method of Installation – Notes

2.1 **DualProof T** should be placed onto the properly prepared substrate, with the fleece facing towards the concrete which is to be waterproofed.

2.2 Ensure that the blinding concrete layer is laid smoothly without any unevenness. And that the bricks are laid to a level higher than the raft foundation thickness, with plaster applied.

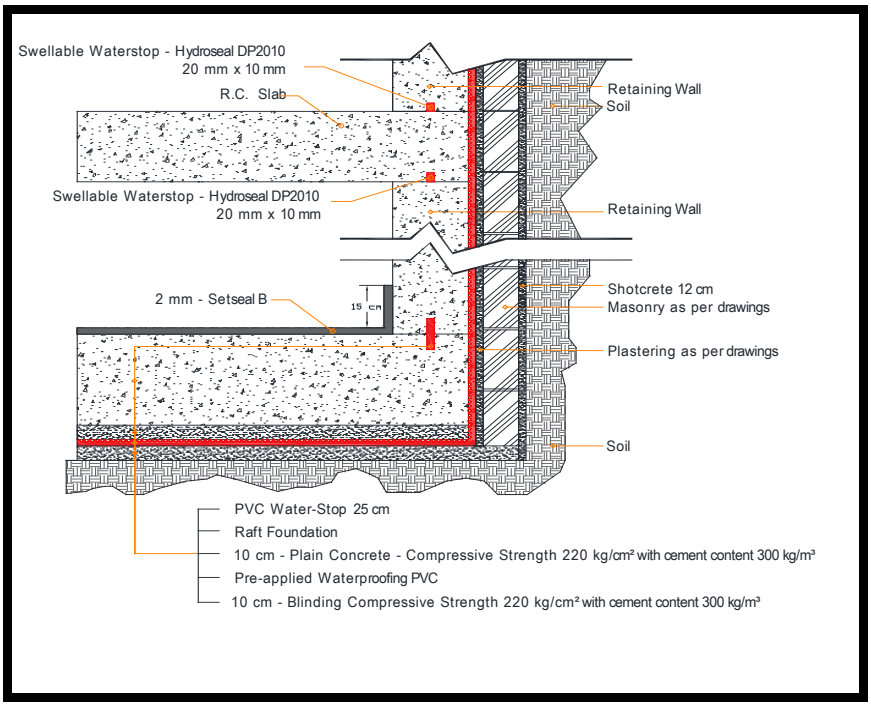
2.3 The edges of the membrane should be overlapped by a minimum of 50mm, and the ends of the rolls staggered by a minimum of 300mm.

2.4 All overlaps should be sealed using suitable heat-welding equipment.

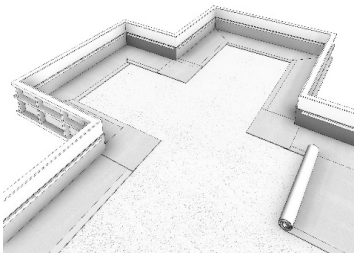
2.5 The installed membrane should be inspected for damage prior to the placement of the concrete.

2.6 In the unlikely event of damage occurring to the membrane, repairs may be completed by simply placing a patch of membrane over the damaged area and bonding with CEM 805 Adhesive (PVC to Fleece), more details in section 3.4.

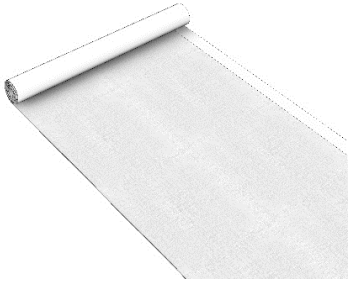
2.7 Sequence of work layers is as shown below in **Detail 1**.



3.0 Foundation, Edges and Corners (Horizontal Application)

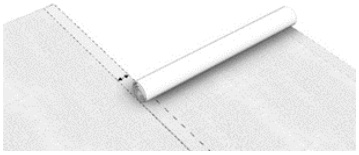


3.1 Firstly, place the **DualProof T** around the edges and up the sides.



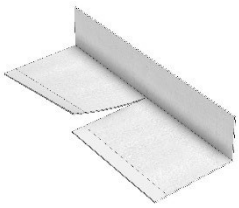
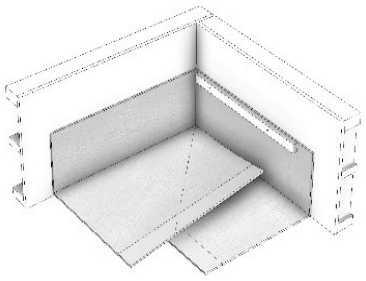
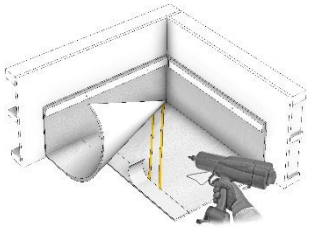
3.2 Place **DualProof T** wrinkle-free onto the properly prepared substrate with the Fleece side facing upwards (Fleece to the fresh concrete side).

Weld the overlap with a Hot-air Welder.



3.3 The second **DualProof T** layer has to be placed over the overlap area of the first membrane. (Example Side-Lap overlap.).

3.4 For corners, corner pieces could be prepared using **DualProof T** and Cem805 adhesive as described below:

		
Cut as shown.	Shape to fit the corner, and cut the excess of the top membrane at an angle of 45° as shown	Apply **CEM805** to the complete area that has to be glued and press down the membrane using a pressure roller

4.0 Welding

4.1 Thermal welding on PVC membrane:

4.1.1 Welding Side-Lap overlaps

Side Lap overlap is the overlap between 2 adjacent membrane rolls laid side-by-side, utilize the fleece free part of one of the membranes as an overlapped welding area. (Refer to **Detail 1 & 2**)

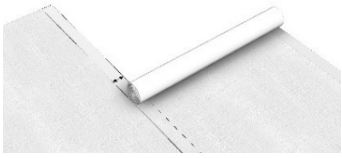
4.1.2 Welding Roll End overlaps.

Roll End overlap is the overlap between the top edge of a membrane roll and the bottom edge of the roll above it. (Refer to **Detail 1 & 2**)

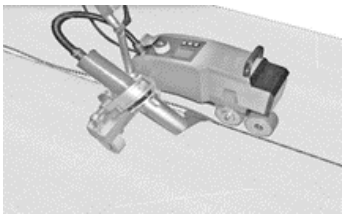
Note: all thermal welding is done on the PVC side of the membrane (PVC to PVC.)

4.2 Welding Side-Lap overlaps

4.2.1 Place **DualProof T** wrinkle-free onto the properly prepared substrate

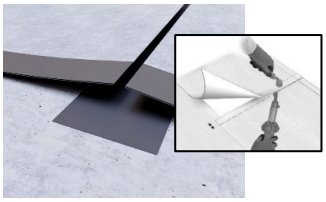


4.2.2 Place the second **DualProof T** layer over the PVC overlapping strip (50 mm fleece free part of the strip) covering the PVC overlapping strip completely.



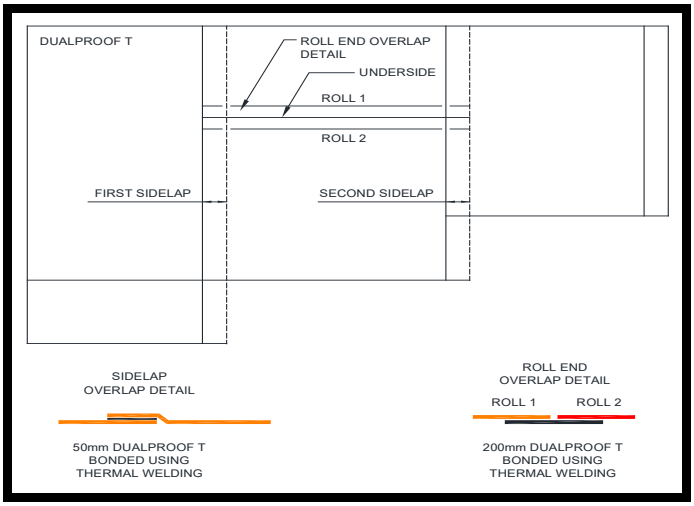
4.2.3 Weld the overlap using a Hot-air Welder while applying pressure using a pressure roller.

4.3 Welding Roll End overlaps



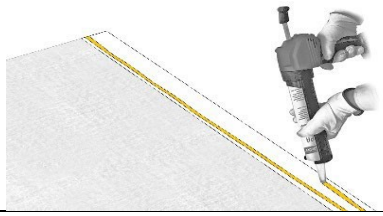
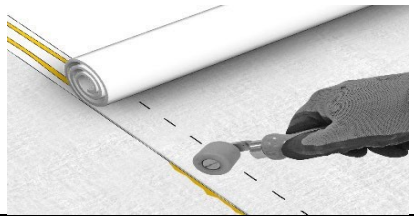
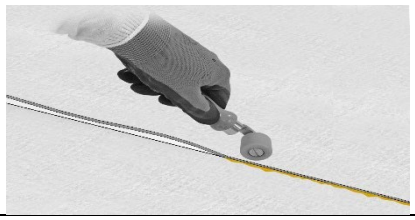
4.3.1 Place half of the DualProof PVC Strip (min. 5 - 10 cm overlap on each of the sides) under the laid DualProof membrane. Align the membrane and place it on the other half of the PVC tape. When using a manual Hot-air Blower, weld the overlap (PVC to PVC) and press it together with the roller.

(Refer to **Detail 1 & 2**)



4.4 Using glue for special cases and repair (PVC to fleece or PVC to PVC)

Where needed (i.e. creating corner pieces, using repair patches), bonding with CEM805 adhesive can be done fleece side to PVC membrane or PVC membrane to PVC membrane.

		
DualProof T should be placed wrinkle-free onto the properly prepared substrate. CEM805 adhesive is applied in a zig-zag shape or in one/two (straight) rows to the PVC overlap strip.	Immediately after placing the adhesive, the second **DualProof T** layer has to be placed over the PVC strip (fleece facing concrete), covering the PVC strip completely.	Glue the membranes together and fix / press with a pressure roller or equivalent method. Cover the PVC strip completely.

5.0 Walls Application (Vertical Application)

5.1 All substrates onto which **DualProof T** membrane is to be installed should be flat and free from sharp objects and voids that are greater than 12 mm.

5.2 All pipe penetrations, service ducts etc. must be detailed prior to placing the waterproofing membrane.

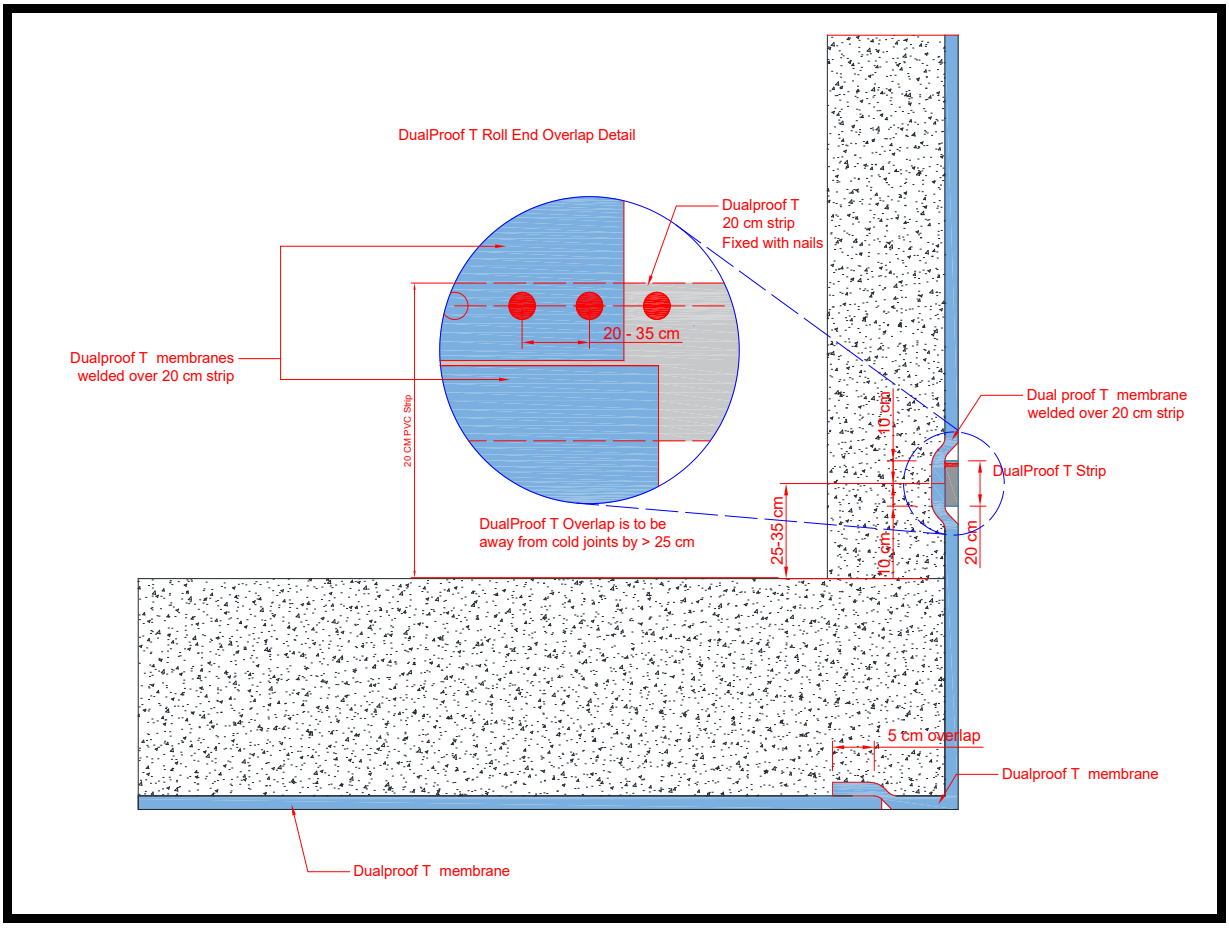
5.3 **DualProof T** membrane should be placed onto the properly prepared surface with the fleece facing towards the concrete to be poured.

5.4 **DualProof T** membrane should be installed on properly prepared vertical surfaces by cutting the membrane into the required lengths, securing the membrane at the top using nail-fixings, and allowing it to extend down over the previously installed under-slab membrane by at least 100 mm.

5.5 Fix a 20 cm wide **DualProof T** strip horizontally to the wall with PVC side exposed. Using a nailing gun fix the strip with nails every 20-35 cm along the horizontal upper edge (placing nails on the upper 3 cm portion of the 20 cm strip) as shown on the wall in Detail 2.

5.6 **DualProof T** membrane is to be welded over the strip using a Manual Hot-air Blower (PVC to PVC)

Note: it is recommended to fix the horizonal membrane roll over the strip by performing spot welds along the 20 cm strip every 30 – 40 cm depending on the application temperature.



6.0 Cleaning

6.1 The installed membrane may be cleaned using a soft -brush or a low-pressure system using cold water if required.

6.2 All standing water or any construction debris must be removed from the membrane prior to placing the concrete.

7.0 Damaged Areas

7.1 Damaged areas or formwork ties can be fixed with a strip/patch of **DualProof T** thermally welded (PVC to PVC) to the membrane.

7.2 PVC patches can also be glued with CEM805 (PVC to PVC.

Section C: Cautions

Health and safety

The essential safety, toxicological, physical and ecological data for the handling of **DualProof T** can be taken from the product-specific safety data sheets. Ensure that the correct protective equipment is worn and used in accordance with occupational health and safety measures. The work may only be carried out with suitable (and tested) tools / work equipment.

For further information on refer to the Material Safety Data Sheet.

Section D: Approval and Variations

This method statement is offered by DCP as a 'standard proposal' for the application of **DualProof T**. It remains the responsibility of the Engineer to determine the correct method for any given application. Where alternative methods are to be used, these must be submitted to DCP for approval, in writing, prior to commencement of any work. DCP will not accept responsibility or liability for variations to the above method statement under any other condition.