

PUDLO GP Ultra Seal & GP Ultra Tank Installation Guide

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Introduction

PUDLO Waterproofing Systems has been at the forefront of protecting structures from water ingress for over 140 years. To expand on our widely used Type B (structural integral) concrete, we launched our first successful membrane system (Type A) in 2016. Since then, PUDLO has launched several waterproofing membranes, PUDLO TS TR & TF Membrane, PUDLO GB Self Seal, PUDLO GB Reinforced, PUDLO Liquid Tank / Liquid GB as well as PUDLO GP Ultra+ / Ultra Seal / Ultra Tank which was the first of its kind in the UK to provide protection from both gas and water, in accordance with BS 8485:2015. In addition to this, PUDLO Waterproofing Systems launched PUDLO GB Self Seal.

PUDLO GP Ultra Seal & PUDLO GP Ultra Tank

PUDLO GP Ultra Seal and PUDLO GP Ultra Tank provide protection to ingress of ground gases and are all fully compliant to BS8485:2015 & CIRIA C748. Our PUDLO GP Ultra range are BBA accredited and provide protection from the following:

- Radon
- Carbon dioxide
- Methane
- VOCs / hydrocarbons

PUDLO GP Ultra Seal and PUDLO GP Ultra Tank also provides the following:

- Chemical resistance
- High resistance to gases
- Long term durability (for the lifetime of the building)

- Works with all building materials

PUDLO GP Ultra Tank is high performance, multi-layer, loose laid hydrocarbon barrier. This membrane is manufactured to the highest standard with layered resin.

PUDLO GP Ultra Seal is a peel and stick system which is composed of self-adhesive SBS polymer modified bitumen with an upper surface finish of PUDLO GP Ultra Tank and a lower membrane surface a siliconized polypropylene release film. PUDLO GP Ultra Seal can also be used for below ground waterproofing and gas protection. This can also be applied vertically.

When installing both systems, PUDLO recommends the membranes are installed with the following precautions in mind:

- Installed in ambient air temperatures in excess of 5°C.
- No membrane should be installed where live or standing water is present. Please contact PUDLO if this situation occurs on site
- All substrates should be flush and smooth, with no deep voids or uneven surfaces
- Both membranes should be installed by suitably qualified (NVQ level 2) installer or competent installer / company who has been trained by PUDLO Waterproofing Systems
- Protection boards should be placed once membrane has been installed to avoid damage to the system
- Foot traffic / vehicle traffic should be avoided
- Naked flames / smoking should be avoided and kept away from the system

Membrane jointing - welded application

Sites that show increased levels of CS class of ground gas or where any level of VOCs and/or hydrocarbons are present, PUDLO recommends using welded joints to provide the most effective gas protection. Prior to welding membranes, we strongly advise

Membrane joining - taped application

PUDLO will accept the use of taped systems where this has been specified by us and accepted by ourselves as a taped system. Even though we accept taped systems, we still recommend that, for optimal performance, these membranes are welded. Note: taped joints are not allowed on sites where VOC/hydrocarbons are present. For more information, please refer to BBA certificates for each product.

Please see below steps for taping the membrane:

- Membrane overlaps should be staggered and have at least 100mm of overlap
- PUDLO GP Ultra Tape must be used for all taped joints. PUDLO GP Ultra Tape should be double sided
- For taping joints, please ensure the first layer of membrane is laid with the surface clean, dry and free from frost, dirt and debris. Begin by peeling one side of the protective coating

conducting a trial to ensure that the correct temperature and power supply can be achieved. Welding should be carried out at 180-240°C at a suggested rate of 1.5mm/min on low air flow.

Note: all membrane overlaps should be overlaid by a minimum of 100mm with care being taken ensure a robust seal has been achieved.

from the tape, applying the tape along the outside edge of the 100mm guideline. Next, unroll the second layer of membrane ensuring a 150mm overlap is maintained. Slowly remove the upper layer of protective film from the tape and pressing firmly on the taped joint with a silicone roller to remove trapped air

- To finish the joint, apply an appropriate sealing of tape over the joint to provide a smooth finish

Repair and remediation

As with any membrane system, it's not always possible to avoid damage to the system, even with the best protective measures in place. Should the membrane become damaged with tears or punctures, these may be patched using a small offcut of the same material correctly sized to overlap to at least 100mm beyond the extent of the damage with either tape, or by heat welding (should this method be employed).

Corner units and top hats

To aid installation of PUDLO GP Ultra Seal / Tank, PUDLO have a range of prefabricated internal and external corner units and top hats for service penetrations. Although this is not an essential part of the system, for those more experienced in installation of such membranes, it still makes the installation process quicker and easier, even for the more experienced.

For installation of prefabricated internal / external corner units:

- Place the preformed upstand unit tight into the corner of the masonry wall
- Remove the protective paper from the back of the PUDLO GP Ultra Tape and apply it to the upstand at a height that will ensure a good overlap when the down stand unit is in place. Remove the protective paper from the face of the tape
- Place the preformed unit tight into the corner with the horizontal element sitting on the masonry wall. Press the vertical leg of the unit firmly against the upstand unit, starting at the internal corner and working outwards
- Lastly, apply two lengths of double-sided tape vertically across both upstand and down stand units, one on each return wall, ready to receive the lengths of cavity tray. When the cavity trays are sealed to the upstand units, join them to the floor membrane

For installation of prefabricated top hats

- Cut circular hole through the membrane as

close as possible to the pipe. The membrane needs to fit as tightly as possible, and not through a membrane joint overlap

- Once the pipe is in position, slide the membrane over the top of prefabricated top hat (top hats come in various sizes)
- Raise the top hat unit and cut four lengths of double-sided tape (one for each side of the square skirt). One length is also to be cut to go around the penetration
- Start to remove the protective paper from the double-sided tape and the pipe, and raise it up at an angle so that it projects above the top hat unit once stuck to the membrane
- Release the paper backing from each of the strips previously cut
- Lower the top hat unit, ensure that the free end of the protective paper around the pipe is within reach and seal the horizontal skirt to the membrane
- Remove the remainder of the protective paper from the PUDLO GP Ultra Tape around the pipe
- Seal the junction of the horizontal skirt and the membrane with the appropriate sealing tape and secure the top hat unit to the pipe with a jubilee clip
- Wrap Surestop BWB around each penetration with a minimum of 75mm cover

Pile cap / Rebar penetrations

Pile caps are sealed using PUDLO Liquid GB or a layer of PUDLO GP Ultra Tape. Apply the sealant thoroughly to the penetration area and make sure a coating of 1.00mm is achieved.

Limited Warranty

PUDLO GP Ultra Seal & PUDLO GP Ultra Tank should only be installed once the site ground conditions are suitable to receive the waterproofing product. **PUDLO GP Ultra Seal & PUDLO GP Ultra Tank** is designed to be used on most substrates and is NOT designed to waterproof against movement / expansion joints. Please consult PUDLO for special installation guidelines. The information and data contained herein is believed to be accurate and reliable. Specifications and other information contained within this 'guide' supersede all previously printed material and is subject to change without prior notice. Manufacturer's warranty of the installed system is available. Please contact PUDLO for terms and limitations. All goods sold by the seller are warranted to be free from defects in material and workmanship. The warranty is in lieu of and excludes all other warranties not expressly set forth herein. Seller shall not be liable for incidental or consequential losses, damages or expenses, directly or indirectly arising from the sale, handling or use of goods, or from any other cause relating thereto, and seller's liability hereunder in any case is expressly limited to the replacement (in the form originally shipped) of goods not complying with this agreement or at seller's election, to the repayment of, or crediting buyer with, an amount equal to the purchase price of such goods, whether such claims are for breach of warranty or negligence. Any claim by buyer with reference to the goods sold hereunder for any cause shall be deemed waived by buyer unless submitted to seller in writing within 30 days from the date buyer discovered or should have discovered any claimed breach.

Materials should be inspected and tested by purchaser prior to their use if product quality is subject to verification after shipment. Performance guarantees are normally supplied by the applicator of the **PUDLO GP Ultra Seal & PUDLO GP Ultra Tank**