



Part of the DB Group

PRODUCT DATA SHEET

PUDLO GP Ultra Seal

DESCRIPTION

PUDLO GP Ultra Seal is a multi-layer, polyethylene membrane with an adhesive coating for vertical application.

USES

PUDLO GP Ultra Seal protects structures from gas including VOC's, Carbon Dioxide, Methane, Radon, Hydrocarbons and air and moisture. **PUDLO GP Ultra Seal** can be used as a post applied waterproofing and damp-proof membrane.

BENEFITS

- Recognised as an accepted system for gas and water protection by NHBC.
- Quick and easy installation.
- Can be installed in all weather conditions (all weather adhesive backing).

TECHNICAL DATA

Testing has been completed and carried out in accordance with the new test criteria under BS 8485:2015 and CIRIA C748 to determine the permeation rates for a range of VOC's, methane and Carbon Dioxide. Immersion testing has also been completed for chemical resistance to EN 1441 and EN 14415.

Physical Properties

| Characteristics | Test Method | Unit | PUDLO GP Ultra Seal |
|-----------------|-------------|------------------|---------------------|
| Thickness | EN 1849-2 | mm | 1.2 |
| Width | EN 1849-2 | M | 1 or 0.3 |
| Length | EN 1849-2 | M | 20 |
| Weight | EN 1849-2 | g/m ² | 1000 |

Hydraulic Properties

| Characteristics | Test Method | Unit | PUDLO GP Ultra Seal |
|---|-------------|-----------------------|---------------------|
| Water Vapour Rate | EN 1931 | g/m ² /day | 0.14 |
| Water Tightness (60kPa) | EN 1928 | - | PASS |
| Water Tightness (196kPa – 20m water head) * | EN 1928 | - | PASS |

**basement application*

Mechanical Properties

| Characteristics | Test Method | Unit | PUDLO GP Ultra Seal |
|---------------------------------|----------------|--------|---------------------|
| Resistance to Static Load | EN 12730 | Kg | >20 |
| Tensile Strength (MD) | EN 12311-1 | N/50mm | >550 |
| Tensile Strength (CMD) | EN 12311-1 | N/50mm | >400 |
| Tear Resistance (MD) | EN 12310-1 | N | >300 |
| Tear Resistance (CMD) | EN 12310-1 | N | >300 |
| Resistance to Impact | EN 12691-B | N | 650 |
| Reaction to Fire | EN ISO 11925-2 | Class | E |
| Resistance to Artificial Ageing | EN 1296 | - | PASS |
| Resistance to Chemicals | EN 1847 | - | PASS |



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Vapour Permeability – 100% Concentration

| Characteristics | Test Method | Unit | PUDLO GP Ultra Seal |
|--|----------------|------------------------|---------------------|
| Transmission Rate of Benzene | EN ISO 15105-2 | mg/m ² /day | 2250 |
| Transmission Rate of Toluene | EN ISO 15105-2 | mg/m ² /day | 2370 |
| Transmission Rate of Ethyl Benzene | EN ISO 15105-2 | mg/m ² /day | 400 |
| Transmission Rate of Xylene (m,p,o) | EN ISO 15105-2 | mg/m ² /day | 690 |
| Transmission Rate of Hexane | EN ISO 15105-2 | mg/m ² /day | 98.25 |
| Transmission Rate of Vinyl Chloride | EN ISO 15105-2 | mg/m ² /day | 36.44 |
| Transmission Rate of Trichloroethene (TCE) | EN ISO 15105-2 | mg/m ² /day | 1.44 |
| Transmission Rate of Tetrachloroethene (PCE) | EN ISO 15105-2 | mg/m ² /day | 1.59 |

Gas Permeability

| Characteristics | Test Method | Unit | PUDLO GP Ultra Seal |
|---|----------------|----------------------------|-------------------------|
| Methane Permeability | EN ISO 15105-1 | ml/m ² /day/atm | 0.13 |
| Methane Permeability (Welded Joint) | EN ISO 15105-1 | ml/m ² /day/atm | 1.00 |
| Carbon Dioxide Permeability | EN ISO 15105-1 | ml/m ² /day/atm | 3.01 |
| Transmission rate of Vinyl Chloride Gas | EN ISO 15105-1 | ml/m ² /day/atm | 0.04 |
| Radon Permeability | SP Method 3873 | m ² /s | 3.0 x 10 ⁻¹² |

Certification & Compliance

| Organisation | Requirements |
|--------------|------------------------------------|
| CE Mark | EN13967 |
| NHBC | Chapter 5.4 & Traffic Light System |
| BS 8485:2015 | Methane, Carbon Dioxide |
| CIRIA C748 | VOC Barrier |
| BS 8102:2009 | Type A (Barrier) |

Durability and Chemical Resistance

| | | | |
|--|--------------|------------------|------|
| Chemical Resistance - SULFURIC ACID (10% solution of Sulfuric Acid (H ₂ SO ₄)) 50° for 56 days. | EN 14414 – A | Tensile Strength | 100% |
| | | Result | PASS |
| Chemical Resistance - BASIC (Calcium Hydroxide saturated suspension) 50° for 56 days. | EN 14414 – B | Tensile Strength | 100% |
| | | Result | PASS |
| Chemical Resistance - SOLVENTS (35% Diesel, 35% Paraffin, 30% Oil HD30 (vol) 50° for 56 days. | EN 14414 – C | Tensile Strength | 100% |
| | | Result | PASS |
| Chemical Resistance - SYNTHETIC LEACHATE (Mixture of 14 acids, chlorides, sulphates and phosphate) 50° for 56 days. | EN 14414 – D | Tensile Strength | 100% |
| | | Result | PASS |
| Resistance to Leaching - HOT WATER (Deionised water) 50° for 56 days. | EN 14415-A | Tensile Strength | 100% |
| | | Result | PASS |
| Resistance to Leaching - AQUEOUS ALKALINE (Saturated Calcium Hydroxide) 50° for 56 days. | EN 14415-B | Tensile Strength | 100% |
| | | Result | PASS |
| Resistance to Leaching - ORGANIC ALCOHOL (30% methanol, 30% isopropanol, 40% glycol) 50° for 56 days. | EN 14415-C | Tensile Strength | 100% |
| | | Result | PASS |

*Table above, values are Typical, with the exception of Thickness, which is Nominal. Typical indicates the mean value derived from the samples taken for any one test as defined in the BS EN ISO standard - usually the mean of five samples. Nominal is a guide value.



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PACKAGING

1.0 x 20m. Product is available in black and silver colour.

ANCILLARY PRODUCTS

- PUDLO Ultra Detailing Strip
- PUDLO Self Seal Primer (2 coats)
- Surestop BWB
- Surestop SWB
- Surestop Adhesive
- Surestop SM
- Surestop Voidformer

HEALTH & SAFETY

PUDLO GP Ultra Seal rolls are heavy in excess of 20kg. Please refer to **PUDLO GP Ultra Seal** MSDS for more information.

FIRE

Refer to **PUDLO GP Ultra Seal** MSDS.

STORAGE & SHELF LIFE

Rolls of **PUDLO GP Ultra Seal** should be stored horizontally, and pallets should not be stacked on top of one another.

PUDLO GP Ultra Seal should be stored in a cool, dry place, and be protected from exposure to rain, sun, heat and cold temperatures prior to installation. Exposure to sunlight for extended period of time could cause difficulty with removal of the polyethylene release film.

For further information on accessories that are used with **PUDLO GP Ultra Seal** please contact PUDLO Head Office on 01954 780687 or email sales@pudlo.com.

***PUDLO GP Ultra Seal** offers a safe solution for the protection of buildings and occupiers against all levels of Hydrocarbons, Methane, Carbon Dioxide and Radon ingress. Typically, these are sites previously used as petrol stations, coalfields, landfill sites, contaminated industrial sites, Fracking sites, and heavily contaminated sites.*