



NBS PLUS MANUFACTURER'S PRODUCT PAGE

Manufacturer: PUDLO
Product name: PUDLO WATERPROOF
CONCRETE SYSTEM



Product summary: (a one sentence product description used to differentiate between similar products)
Concrete admixture.

Product general description:

PUDLO provides full design and specification service.

A chloride-free, hydrophobic, pore-blocking admixture which can improve the performance of concrete by reducing water absorption, permeability, drying shrinkage and therefore the risk of cracking.

It enables a significant reduction in the water/ cement ratio of the mix while enhancing the workability, increasing strength by a minimum 10% and improving dimensional stability and durability of the concrete. The improved waterproofing performance of the concrete can remove the need for an impervious membrane and the costs and risks associated with its installation.

Benefits:

- Enhanced durability.
- Improved resistance of concrete to chemical attack and corrosion and therefore to corrosion of reinforcement.
- Enhanced resistance to frost attack.
- Reduced shrinkage.
- Increased compressive and tensile strength without increase in cement content.
- Reduced risk of efflorescence and staining.
- Increased resistance to water penetration.
- Acid resistant.
- 20 year warranty and full technical support*.

How Pudlo works:

- Capillary restriction: PUDLO modified concrete has a distinct microstructure characterised by discontinuous pore formation and an order of magnitude reduction in the size of the capillary pore network.
- Capillary blocking: In addition to altering the microstructure, PUDLO contains hydrophobic pore-blocking compounds. These permanently seal remaining voids in the concrete to further increase structural durability, providing an additional level of protection against water migration and corrosive attack.
- Pudlo will also attend site to give initial training, then assign a dedicated Site Inspector to work alongside the site team who will visit the site, approve and sign-off each sectional joint before and after pouring concrete. This on-site QA support is designed to ensure that a watertight structure is achieved and the highest standards are met at every stage of construction and subsequently Pudlo will issue a full 20 year warranty for the entire structure including the joints – not just the concrete itself. This can be further supported by an independent insurance-backed guarantee.

Concrete mix:

Pudlo recommend the following concrete mix which must be used when specifying the Cement Waterproofing Powder:

- Cement/ combination content (minimum): 350 kg/m³.
- Water:cement ratio (maximum): 0.40.
- Consistence class: S3 (100–120 mm).

Product specification clause

Product reference:

Pudlo CWP

Product properties:

No product properties

End of product specification clause**As standard:** (use this box to describe the features of the product that are provided as standard)**General:**

Structures built incorporating Pudlo CWP (Cement Waterproofing Powder) should be designed to the relevant sections of BS 8007:1987, BS 8102:2009, BS 8110-1:1997, BS EN 1992-1-1:2004 and BS EN 1992-1-2:2004.

Performance:

The following performance criteria were achieved using concrete designed to the mix specification given in the British Board of Agrément (BBA) certificate 01/3843:

- Water permeability: 0.64×10 (to the power of -15).
- Compressive strength to BS 1881-116: 82 N/mm² after 28 days.

Options: (use this box to describe the features of the product that are optional)

No optional features

Approvals: (use this box to list any third party product approvals, e.g. Kitemark and British Board of Agrément certificates)

- Organisation: British Board of Agrément
 - Standard/ Certificate: 01/3843
 - Details:
- Organisation:
 - Standard/ Certificate: ISO 9001
 - Details:
- Organisation:
 - Standard/ Certificate: WRAS
 - Details:
- Organisation:
 - Standard/ Certificate: CE MARK
 - Details:
- Organisation:
 - Standard/ Certificate: NHBC
 - Details:

Manufacturer notes [not for publication]:**Instructions:**

1. Use this product page to amend the NBS Plus entry for Pudlo PUDLO WATERPROOF CONCRETE SYSTEM.
2. Microsoft Word can automatically track the amendments you make to this document and this feature has been selected for you. To control these settings use the Reviewing toolbar (Tools | Customize | Toolbars | Reviewing). All you have to do is simply type in your amendments and return this document to us.
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5. Alternatively, for simple corrections you can email us at nbsplusproduction@thenbs.com with a description of the required changes. You can also print out this page, annotate the changes by hand and return to NBS using the address below.

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NBS
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St Nicholas Street
Newcastle upon Tyne NE1 1RH

Key:

Within the "Product Specification Clause" section, the following notation is used:

[] This is an empty insert, into which a specifier can enter their own requirements (e.g. colour or size).

[d] The value below this notation is the default value for a property, meaning that is selected automatically for the specifier.

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NBS PLUS MANUFACTURER'S PRODUCT PAGE

Manufacturer: Pudlo
Product name: HDBR Waterbar

Currently there is no image attached to this product. If you would like to include an image please contact nbsplusproduction@theNBS.com for details.

[Jump to instructions](#)

Product summary: (a one sentence product description used to differentiate between similar products)

Hydrophilic waterstop.

Product general description:

A black elastomeric hydrophilic strip made of natural sodium bentonite clay and synthetic rubber designed for the integral sealing of construction joints in cast-in place concrete.

HDBR Waterbar expands up to 400% of its original dry volume on contact with water to form a positive seal. HDBR Waterbar is also suitable for use in potable water situations.

Advantages:

- HDBR Waterbar is a permanently active ecological and user-friendly system simple and quick to install.
- The composition of HDBR Waterbar prevents premature swelling.
- HDBR Waterbar has a proven track record in water treatment plants, water purification plants, underground parking lots, water reservoirs, swimming pools, water tanks, metro works and other concrete structures subject to high water pressure.
- HDBR Waterbar can resist hydrostatic pressures of up to 80 m of water column = 8 bar.
- The durability and performance of the HDBR Waterbar will exceed the design life of the structure.
- HDBR Waterbar will not dissolve in water and is non-polluting.

Limitations:

- HDBR Waterbar is not described as a self-adhesive product, and is secured with a continuous bead of HDBR Adhesive and where required masonry nails. A suitable adhesive should be used to fix to metal or PVC (pipes) surfaces.
- Not designed, nor intended to function as an expansion joint sealant.
- Designed for structural concrete and requires a minimum of 70 mm of concrete cover to all sides. Should only be used in applications where the product is completely encapsulated within the concrete.

Applications:

Applications include both vertical and horizontal non-moving concrete construction joints, new to existing concrete construction, irregular surfaces and around through-wall penetrations such as plumbing and utility pipes. Works in both continuous hydrostatic and intermittent hydrostatic conditions.

Designed for use in reinforced structural concrete, utilizing two rows of reinforcing steel, with a minimum thickness of 200 mm, providing the HDBR Waterbar with no less than 70 mm concrete cover to all sides.

Product specification clause

Product reference:

HDBR Waterbar

Product properties:

No product properties

End of product specification clause

As standard: (use this box to describe the features of the product that are provided as standard)

No standard features

Options: (use this box to describe the features of the product that are optional)

No optional features

Approvals: (use this box to list any third party product approvals, e.g. Kitemark and British Board of Agrément certificates)

No approvals

Manufacturer notes [not for publication]:

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NBS PLUS MANUFACTURER'S PRODUCT PAGE

Manufacturer: Pudlo
Product name: Tie Bolt Hole Plug

Currently there is no image attached to this product. If you would like to include an image please contact nbsplusproduction@theNBS.com for details.

[Jump to instructions](#)

Product summary: (a one sentence product description used to differentiate between similar products)

Concrete repair system.

Product general description:

A specially formulated, pre-mixed cementitious concrete powder. A blend of fine cements, high quality graded sands and aggregates, polymers and admixtures.
The material mixes readily with water to produce a non-shrink, water-resistant repair material that hardens to give a high strength product.

Uses:

- Concrete repairs to reinforced concrete structures.
- Load bearing and structural applications.
- Repair and protection of concrete in marine environments.
- Motorway bridges, viaducts and carriageway repairs.
- To repair concrete floors, car parks, pathways, loading bays, roadways and motorways.

Benefits:

- Designed to Department of Transport Specification for Highways Works.
- Portland cement based, acrylic modified and microsilica enhanced.
- Quickly and easily mixed, pumped or trowelled and placed.
- Water resistant.
- Will not segregate or bleed, and is readily pumpable.
- Excellent mechanical strengths and good bond strengths.
- Resistant to static, dynamic and vibrational stresses.
- Shrinkage compensated, low alkali cements equivalent Na₂O below 3.0 kg/m³.
- Incorporates non-reactive graded sands safe from ASR attack.
- Contains no chlorides, ferrous metal or other deleterious substances.
- Economical, non toxic and safe to use.

Product specification clause

Product reference:

[Tie Bolt Hole Plug](#)

Product properties:

No product properties

End of product specification clause

As standard: (use this box to describe the features of the product that are provided as standard)

No standard features

Options: (use this box to describe the features of the product that are optional)

No optional features

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NBS PLUS MANUFACTURER'S PRODUCT PAGE

Manufacturer: Pudlo
Product name: HDBR Adhesive

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[Jump to instructions](#)

Product summary: (a one sentence product description used to differentiate between similar products)

Waterproof sealant providing a low skin formulation, fast cure and watertight joints.

Product general description:

A high performance, polyurethane single pack, multi-purpose sealant. HDBR Adhesive can be used to provide a low skin formation that is fast cure, non-sag and moisture curing, an excellent adhesive for HDBR Waterbar.

Applications:

For bonding and sealing different substrates in the building industry. Primerless adhesion to most common materials including glass, anodized aluminium, wood, lacquered metal, concrete and stone.

Benefits:

- High elasticity.
- Excellent recovery.
- Tear resistant.
- Good weatherability.
- Easy disposal of used container.
- Watertight joints.
- Resistant to chemical attack from many sources including acetic acid, hydrochloric acid, soda, engine oil, ethanol, sea salt, glycerol, acetone etc.

Product specification clause

Product reference:

HDBR Adhesive

Product properties:

No product properties

End of product specification clause

As standard: (use this box to describe the features of the product that are provided as standard)

No standard features

Options: (use this box to describe the features of the product that are optional)

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NBS PLUS MANUFACTURER'S PRODUCT PAGE

Manufacturer: Pudlo
Product name: PS Swell Mastic

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[Jump to instructions](#)

Product summary: (a one sentence product description used to differentiate between similar products)

One component, polyurethane based sealant for construction joints.

Product general description:

PS Swell Mastic is a one component, polyurethane based, solvent free, hydro swelling mastic, supplied in cartridges and aluminium sausages, for the sealing of construction joints. Cures and swells in the presence of moisture. Curing time depends on the temperature and humidity conditions, i.e. curing time will reduce if temperature is higher. PS Swell Mastic will become firm in 24–36 hours. Performance is not affected by the curing time.

Applications:

- Sealing rough and smooth construction joints of in-situ cast concrete.
- Sealing joints between pre-casts segments (e.g. manholes, box culverts, cable ducts and pipes).
- Sealing around steel H-beams.
- Sealing between rough surfaces (e.g. slurry walls) and concrete slabs.
- Bonding strips sealants to rough surfaces.
- Sealing around bolt spacers and void formers.
- On secant pile walls.

Advantages:

- Solvent free.
- PS Swell Mastic can be applied to concrete, PVC, HDPE, steel etc.
- Excellent filling and adhesion properties provide a first line filling of cracks and voids, even on lightly humid smooth or rough surfaces.
- In contact with water PS Swell Mastic will expand to 350% of its original volume.
- Flexible system, which adapts to the irregular surface of the substrate.
- Easy application with standard caulking gun.
- Durable: will exceed the construction's life.
- Has a good all round chemical resistance and can resist petroleum, mineral and vegetable oils and greases.
- PS Swell Mastic is approved for contact with potable water by WRAS.

Product specification clause

Product reference:

PS Swell Mastic

Product properties:

No product properties

End of product specification clause

As standard: (use this box to describe the features of the product that are provided as standard)

General:

- Colour: White.
- Consistency: Gel/ Paste.

Options: (use this box to describe the features of the product that are optional)

- Elongation at break to DIN 53504 (approximately) 625%.
- Tensile strength to DIN 53504 (approximately) 2.2 N/mm².
- Resistance to hydrostatic pressure (maximum): 150 m of water column.

Approvals: (use this box to list any third party product approvals, e.g. Kitemark and British Board of Agrément certificates)

No approvals

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