

Reddiplex Hydrophilic Waterstop

Prevents the passage of water through joints in concrete

A totally new concept for hydrophilic waterstop, based on advanced development using Nano Particulate Hydrophilic Polymer (NHP's).

Developed for the waterstop market where high performance seals are required for the containment and exclusion of water, both in normal water *and sea water*.

A superior waterstop range of products for use in the civil engineering industry and the construction waterproofing industry.

Applications

- Create water tight seals in newly built construction joints for precast concrete elements.
- Ideal for sealing basements, swimming pools, underground tanks and tunnels.
- A safe solution for the sealing of pipe penetrations.
- The unique formulations can be installed in high cross-sectional area seals where there is a degree of movement such as anti-seismic constructions.



Material expansion rates

Normal water

There are two grades of Reddiplex Hydrophilic Waterstop for normal water:

- Standard Swell (beige) 450-500%.
- High Swell (grey) over 1000%.

Sea water

A major industry development by Reddiplex has been the introduction of an advanced waterstop for saline conditions, both static and moving.

- Sea Water Swell (blue) 150-200%.

The Reddiplex Hydrophilic Waterstop range has been extensively tested under wet, dry and re-hydration cycling conditions.

After the removal of water, over a period of time the Reddiplex Hydrophilic Waterstop will dehydrate and shrink back to its original size.

Product Range

A wide range of profiles are available with different cross-sectional areas.

Typical standard profiles are as shown below:

20mm x 5mm	40mm x 35mm
20mm x 10mm	10mm diameter
25mm x 15mm	20mm diameter
25mm x 20mm	30mm diameter
40mm x 25mm	



Technical Information

NHP's are spherical polymer particles in the 500 - 1000nm size range that have been adapted into a specialised elastomeric polymer compound.

The developed compound has good mechanical strength because the **NHP's** are not ejected during swelling and therefore do not leave a fragile matrix like other hydrophilic materials.

NHP's will not disintegrate when subjected to repeated wet/dry cycles, unlike other materials.

NHP's give a controlled swell which is recyclable – swells in contact with water and then return to the original shape when dried out.

Due to the inclusion of **NHP's** the seal will not wash away when in a water passage.

The swelling rate can be adapted or modified to suit a number of different applications.

Due to their high mechanical strength, the seals are very easy to handle and fix in place.

The Reddiplex Hydrophilic Waterstop compound can also be combined with other thermoplastic materials to make composite seals for high demand applications – more information is available on request.



Installation notes

- Easy to install where conventional waterstops would require complex fitting.
- Fix in position using adhesive or masonry nails at regular intervals.
- A suitable adhesive should be used to fix the seal to metal or PVC pipe surfaces.
- On irregular surfaces ensure that direct contact is made between the seal and the substrate along the entire section.
- The seal can be exposed to wet site conditions for up to 3 days prior to the placing of concrete, provided it has been coated with an inhibitor to protect it.
- A minimum of 70mm of concrete is required on all sides to encapsulate the seal within the concrete.
- Joints can be secured by welding, glueing or overlapping.
- Swelling is slower in cold conditions and faster in hot.
- Typically 28 days to reach full swell in Standard Swell Waterstop.



Health and Safety

For detailed information on this product please refer to the relevant Material Safety Data Sheet which is available on request from Reddiplex Limited.

Storage

Store in a cool and dry place and ensure sufficient ventilation. In the correct storage conditions the product has a shelf life of 10 years.

Transport Hazards

No regulations apply for the transport of this material. Not classified as hazardous for road, rail, sea or air transport.

Quality Approval

Reddiplex Limited has a Quality Management System that meets the requirements of BS EN ISO 9001:2000, and is independently verified by BSI Quality Assurance under Certificate FM10371.

Technical Support and Guidance

Should you require any further information regarding this product please contact Reddiplex Limited.

The information contained herein is based upon the present state of our knowledge. Recipients of our Reddiplex products must take responsibility for observing existing laws and regulations. Due to our policy of continuous improvement Reddiplex Limited reserves the right to amend specifications without prior notice.

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