



Enviro Hydrotite

Hydrophilic Chloroprene Rubber Waterstop



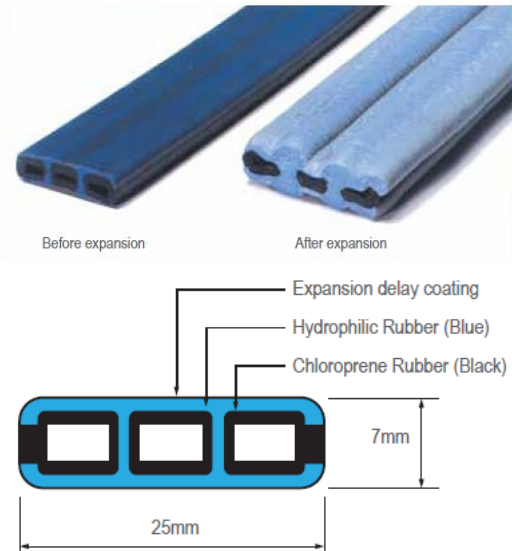
DESCRIPTION

Enviro Hydrotite is the brand name for a state of the art hydrophilic waterstop with unmatched durability and water sealing capacity. Enviro Hydrotite expands as it absorbs water and fills up concrete joint gaps conforming to the gap variation, ensuring excellent sealing. Enviro Hydrotite is based on the technology of hydrophilics, a material which expands in a controlled fashion by approximately eight times by volume in the presence of moisture to create a pressure seal within the joint, when properly installed.

Enviro Hydrotite is capable of sealing heads of water up to 30 metres and is used extensively throughout the construction industry to seal horizontal and vertical construction joints for poured in-situ concrete. Enviro Hydrotite consists of a unique combination of expanding hydrophilic materials and non-expanding chloroprene rubber, co-extruded together to form a single strip. The expanding section is blue with the non-expanding section being black.

The co-extruded design means that the expansion is directed across the joint for maximum sealing performance. This expansion creates an effective compression seal within the joint, preventing the egress of water through it. Upon expansion, Enviro Hydrotite turns from a dark blue colour to a light blue colour, so that a visual inspection of the Enviro Hydrotite can be made and so the contractor can see if the Enviro Hydrotite has pre-expanded.

Enviro Hydrotite is treated with a delay coating to prevent it from absorbing water from the wet concrete of the second pour, and to also help stop any premature expansion should the joint become ponded with water, prior to the second pour being placed, and to stop any premature expansion taking place before curing of the concrete. Enviro Hydrotite, as with any hydrophilic waterstop, will return to its original size if there is no more water or moisture present. Enviro Hydrotite will then re-expand when water or moisture is reintroduced to the joint. Some initial leakage may occur before Enviro Hydrotite re-expands fully. Repeated wet and dry cycling of this nature does not affect the functioning of Enviro Hydrotite.



FEATURES

- Easy to handle and install
- Excellent adhesion to concrete surfaces
- Outstanding physical properties
- Profiles with self-adhesive backing allow for simple and fast installation processes
- Co-extruded design means expansion is directed across the joint for maximum seal
- Unaffected by repeated wet and dry cycles
- No site welding is required for joining processes
- Has a delay coating to help prevent premature expansion
- Extra delay coating is available for very wet conditions, if required
- Changes colour as a visual alert to let you know it has expanded
- No need for special intersections, joining is by simple butt joints
- Can be applied to rough surfaces using Leakmaster gun grade waterstop
- Can be joined to traditional PVC waterstop
- No compaction or displacement problems
- Non-toxic and non-hazardous

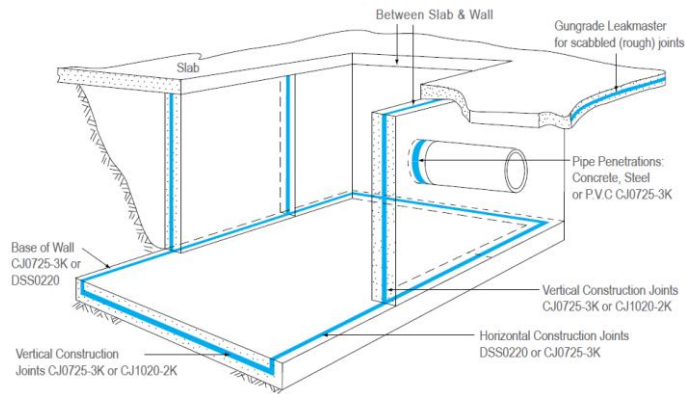




TYPICAL USES

Enviro Hydrotite is to be used where watertight integrity is the prime issue. Typical applications where there is a need to achieve a water seal include:

- Sewage treatment plants
- Water treatment plants
- Reservoirs
- Water tanks
- Swimming pools
- Tunnels
- Subway stations
- Basements
- Pits
- Pipe penetrations



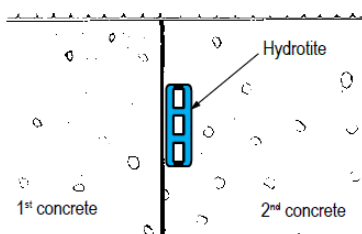
PROFILE SELECTION

Shown below is a guideline of the types of Enviro Hydrotite profiles that are available for use in construction joints in various projects.



- VERTICAL CONSTRUCTION JOINTS
CJ0725-3K, CJ1020-2K, CJ1030-4M
- HORIZONTAL CONSTRUCTION JOINTS
DSS0220, CJ0725-3K, CJ1020-2K, LEAKMASTER
- JOINT AND LEAK REPAIRS
RSS RODS VARIOUS SIZES
- PIPE PENETRATIONS
DSS0220, CJ0725-3K, LEAKMASTER
- THRU TIE HOLES
RSS RODS, RSS2519D, RSS2014D

Typical Application of Hydrotite



PHYSICAL PROPERTIES

Hydrophilic Rubber

	Specification	Typical
Hardness	A50 ± 5	A53
Tensile Strength MPa	Min. 2.5	2.9
Elongation %	Min. 600	700

Chloroprene Rubber

	Specification	Typical
Hardness	A50 ± 5	A53
Tensile Strength MPa	Min. 8.8	10.1
Elongation %	Min. 400	530

APPLICATION

Hydrophilic expanding waterstops shall be placed at the joints in the concrete at the locations shown on the drawings in accordance with the requirement of the specification. Waterstops where shown on drawings shall be Enviro Hydrotite Hydrophilic Waterstops.

The waterstop shall consist of a non-expansive black chloroprene rubber, co-extruded with a blue hydrophilic rubber, which is capable of swelling by approximately eight times by volume. The waterstop shall be treated with a delay coating to prevent premature expansion and be able to change colour upon expansion which acts as a visual alert that the waterstop has started to expand. The waterstop is to be installed strictly in accordance with the manufacturer's recommendations.

For further information on substrate preparation, application project specific advice, please consult EnviroSystems.

customerservice@envirosystems.com.au

LEAKMASTER

Leakmaster is a water swelling gun grade waterstop with excellent and unique physical properties. It can be used in places where the standard extruded profiles are not suitable in areas such as rough concrete surfaces or as a back-up to these profiles in complex junctions.

CHEMICAL RESISTANCE

The influence of pH values of concrete, grouting material and ground water upon the expansion of Enviro Hydrotite was tested using hydrophilic rubber as below. The specimen was immersed in each solution for seven days and the retention value of tensile strength and elongation were measured.



Then, the specimen was removed from each solution and placed in tap water for seven days. The specimen was then compared with specimens that had been expanded in tap water only.

The retention value of both physical properties and expansion was compared with that of specimens tested in tap water. Enviro Hydrotite keeps the retention values 90% or more in all solutions listed in the table below. In the table, "O" indicates retention value 90% or more.

TYPE OF TEST SOLUTION	CHANGE OF PHYSICAL PROPERTIES AFTER 7 DAYS IMMERSION	
	TENSILE STRENGTH	ELONGATION
pH 3 aqueous solution	○	○
pH 5 aqueous solution	○	○
pH 7 (tap water)	—	—
pH 9 aqueous solution	○	○
pH 11 aqueous solution	○	○
Ferrous aqueous solution	○	○
Bentonite aqueous solution	○	○
Grout aqueous solution	○	○

TYPE OF TEST SOLUTION	RETENTION OF EXPANSION VALUE AFTER 7 DAYS IMMERSION IN TAP WATER FOLLOWING IMMERSION IN SOLUTION
	pH 3 aqueous solution
pH 5 aqueous solution	○
pH 7 (tap water)	—
pH 9 aqueous solution	○
pH 11 aqueous solution	○
Ferrous aqueous solution	○
Bentonite aqueous solution	○
Grout aqueous solution	○

SHELF LIFE

Enviro Hydrotite can be stored in its original sealed containers for 12 months, when placed in a cool environment below 25°C. Any unused material should be returned to its original packaging as soon as possible to prevent damage. Once opened and resealed for later use, the shelf life could vary depending on storage conditions. Always check product quality before using after prolonged periods of storage. If unsure please contact EnviroSystems for advice.

HEALTH & SAFETY ADVICE

For further information or advice on health and safety precautions, safe handling, storage and correct disposal of products, please refer to the most recent product Material Safety Data Sheet (MSDS), which is available upon request. In confined spaces or in still air conditions, the use of a ventilation fan or suitable respirator should be used, and the advice and approval of the Site Safety Supervisor is essential.

We're here to help you!

It is a good idea to keep a journal of your waterproofing job, whether big or small.

- Take pictures at all stages of your work, including preparation
- Record the quantity and description of products used with corresponding batch numbers
- Record dates and times of when you applied products, from start to finish

Please do not hesitate to contact us for any questions you may have.

EnviroSystems Technologies Pty Ltd

Address 295 Princes Highway, St Peters NSW 2044
Sydney, Australia
Phone +61 2 8595 8699
Fax +61 2 8595 8660
Email customerservice@envirosystems.com.au
Web www.envirosystems.com.au

ISSUE 1

DATE September 2019



STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use of application and no warranty as to accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use. Note: Field service where provided, does not constitute supervisory responsibility. Suggestions made by EnviroSystems Technologies either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not EnviroSystems Technologies are responsible for carrying out procedures appropriate to a specific application.