

# HYDROTITE WATERSTOP

## Hydrophilic Joint Sealer



Hydrotite is capable of sealing heads of water up to 50m and is used throughout the construction industry to seal horizontal and vertical construction joints for poured in-situ concrete.

- Co-extrusion ensures expansion is across the joint for maximum seal
- Unaffected by repeated wet and dry cycles
- No site welding as is required for traditional PVC waterstops
- Has a delay coating to help prevent premature expansion
- 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
- Easy to handle and install
- Can be joined to traditional PVC waterstops



Colour	Product Code	Roll Size
Blue	HYDROTITE	25mm x 7mm x 10m

## SOLCO - Water Stops

Last Issue Date: 08.02.13

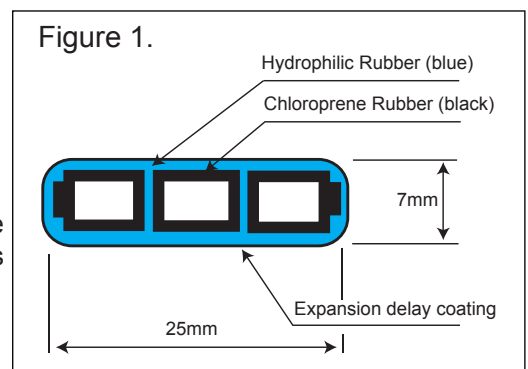
Hydrotite is a hydrophilic waterstop which exhibits excellent durability and water sealing capacity. It expands as it absorbs water and fills up concrete joint gaps conforming to the gap variation, ensuring excellent sealing. Hydrotite is based on the technology of hydrophilics, a material which expands 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 Hydrotite is capable of sealing heads of water up to 50m and is used throughout the construction industry to seal horizontal and vertical construction joints for poured in-situ concrete.

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 nonexpanding 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 joints which shuts out the water path. Upon expansion Hydrotite turns from a dark blue colour to a light blue colour so that a visual inspection of the Hydrotite can be made and the contractor can check if the Hydrotite has pre-expanded (as per Figure 2.).

Hydrotite is treated with a delay coating to prevent it from absorbing water from the moist green concrete, to help stop any premature expansion should the joint become ponded with water prior to the second pour and to stop any premature expansion taking place before curing of the concrete.

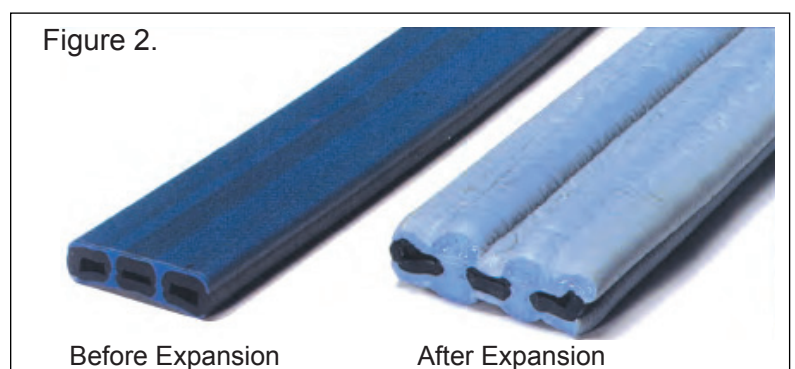
Hydrotite, as with any hydrophilic waterstop will return to its original size if there is no more water or moisture present. Hydrotite will then re-expand when water or moisture is again introduced to the joint. Some leakage may occur before Hydrotite re-expands fully. Repeated wet and dry cycling of this nature does not effect the functioning of Hydrotite. The standard profile and dimensions are as per Fig. 1.



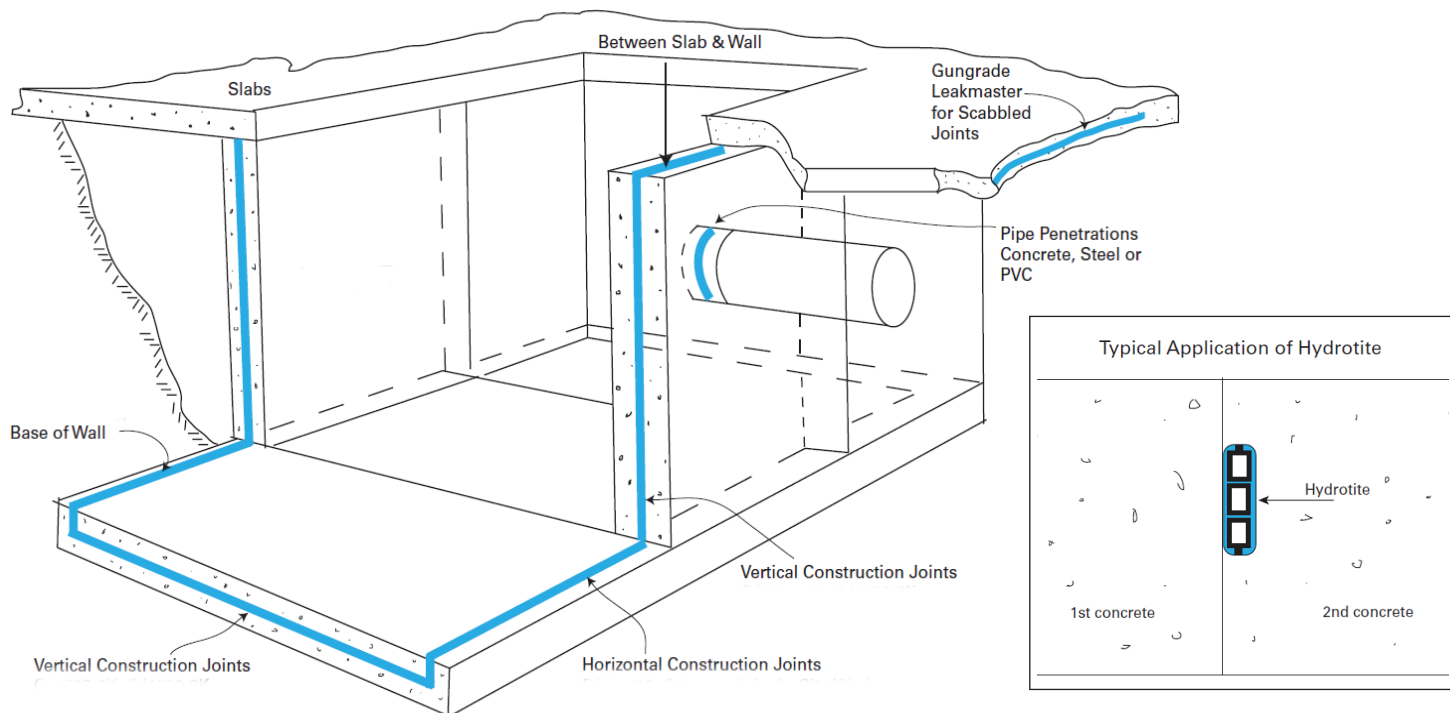
### Areas of Application

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:-

- Sewerage treatment plants
- Pipe penetrations
- Subway stations
- Water treatment plants & Reservoirs
- Basements / Tunnels / Lift Pits



## Typical Areas of Application



### Design Criteria

Hydrotite should be used to prevent the passage of water through low movement joints in both new in-situ concrete and between new and existing concrete. Hydrotite can also be used around penetrating pipe entries prior to concrete placement.

Hydrotite waterstops should be positioned to ensure that a minimum of 50 mm cover of concrete is present to accommodate pressure developed during the swelling process.

Hydrotite is suitable for applications between existing and newly placed concrete where there is little or no steel continuity and therefore some small movement may occur. Hydrotite is not suitable for use in expansion joints.

### Chemical Resistance

The influence of pH values of concrete, grouting material and ground water upon the expansion of Hydrotite was tested using hydrophilic rubber as follows:-

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.

### Limitations

- Not recommended for use in suspended slabs or expansion joints
- Minimum of 50 mm cover of concrete over Hydrotite for reinforced concrete and 100 mm cover for unreinforced concrete based on concrete strength of 22.5N mm<sup>2</sup>
- Expansion rate can vary in salt or contaminated water
- Not for use where excessive shrinkage may occur

### Hydrotite - Technical Properties

Item	Unit	Hydrophilic Rubber		Chloroprene Rubber	
		Standard	Typical	Standard	Typical
Specific Gravity		1.40 ± 0.10	1.35	1.40 ± 0.10	1.41
Hardness	JIS-A	50 ± 5	52	50 ± 5	51
Tensile Strength	N/mm <sup>2</sup>	min 2.94	3.63	min 8.82	12.25
Elongation	%	min 600	760	min 400	435
Colour		Blue		Black	

### Hydrotite - Dimensions & Packaging

Profile	Dimensions	Roll Length	Rolls Per Carton
CJ0725-3K	25mm x 7mm	10m	4 No.

### Hydrotite - Accessories

Hydrotite Adhesive	Available in 1L & 5L
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### Behaviour in chemical solution

Hydrotite exhibited retention values 90% or more in the following solutions:

- 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