

Strong: Hydrowelling Waterstop

DESCRIPTION

A flexible hydrophilic natural rubber and bentonite waterstop for construction joints and sealing precast elements that expands on contact with water. It is manufactured from sustainable materials bentonite & natural rubber that do not negatively impact the environment unlike butyl rubber & Chloroprene rubber profile.

USES & ADVANTAGES

Strong is used to stop water infiltration through both vertical and horizontal non moving construction joints, irregular surfaces and around penetrations through concrete. It is not intended as an expansion joint sealant.

It is designed to replace conventional waterstops in construction joints. The sodium bentonite in Strong is the key to its success. Bentonite swells when in contact with water blocking pores, capillaries, minor cracks & other paths for water forming a permanent impermeable barrier. Uses include in construction joints in various structures including tunnels, basements, culverts, underground structures, pools, reservoirs, canals etc.

Advantages include:-

- Light weight flexible coils easy to apply.
- Fast installation.
- Eliminates seam welding & split forming associated with PVC/rubber waterbars.
- Butt end joining, continuous waterstop.
- Withstands hydrostatic water head up to 70 metres.
- Forms a positive seal, sealing crack & small voids.
- May use in potable water tanks.
- Non toxic.
- Can apply to irregular concrete surfaces. No need to level.
- Does not deteriorate lasts life of structure.
- Ecologically safe & can be used in structures in contact with potable water.
- Self healing.

TYPICAL PROPERTIES

| Property | NS |
|---|------------------------|
| Density | 1.48 g/cm ³ |
| Shore A hardness | 20 |
| Adhesion | Excellent |
| Pliability (1800 bend) | No crack |
| Water Leakage Test (at 5 bars) | No leakage |
| Water Leakage Test (at 5 bars after 5 wet & dry cycles) | No leakage |
| Swelling Pressure | 150 KN/m ² |
| Maximum Free Expansion | 230+50% |

*Note: expansion is related to the quality of water, temperatures, age of material and storage conditions. Do not use in expansion joints.

INSTALLATION OF STRONG

Surface Preparation

The surface should be clean and dry with all dirt, aggregate, rust, debris or standing water removed.

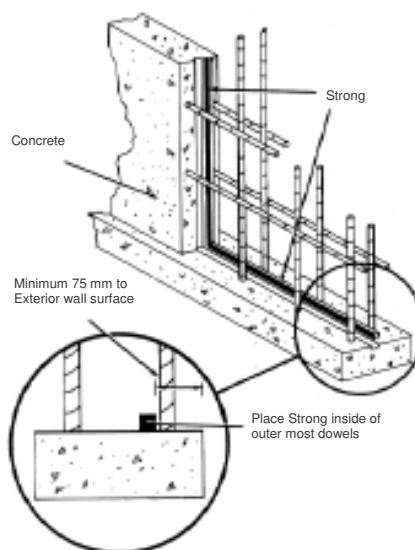
GENERAL INSTALLATION INSTRUCTIONS

Apply by brush strong adhesive along the concrete by the width of strong. One litre of a dhesive will cover approximately 30 metres. Whilst still tacky (within 10-15 minutes) apply the strong. Remove the release paper and press the strong firmly to the surface for several seconds. At the highest coil end on vertical sections pay particular attention. If the adhesive has dried out reapply to the surface. Mechanical fasteners may be used in conjunction with adhesive. Tightly butt end together to form a continuous waterstop. Do not prehydrate or submerge in water. If severe ground water chemicals or salts exist consult with S.T. Products Marketing Ltd. Strong is not self adhering.

Strong Delay Coating: If rain is anticipated before the pouring of concrete Strong may be protected by Strong Delay Coating. The delay coating is applied to the surface of Strong either by brush or spray and will delay swelling for up to several days.

DRAWING DETAILS

Footing joint
Vertical Wall Joints



Typical placement of Strong at concrete construction joints



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Penetrations

For penetration follow the general installation procedures.

Single Pipe: Install around outer diameter of the pipe.

Multiple pipe: Install around each pipe as well as around block out box construction.

Sleeved Pipe: Install around the outer diameter of the sleeve. Install another strip between sleeve's inner diameter & the pipe if there is an excessive gap between inner diameter of the sleeve & the pipe 2 separate waterstops may require installing one on the inner diameter & the other on the pipe. The void should be filled with non shrink cementitious grout.

Pile Caps & Grade Beams: Follow the general instructions above. Install to all construction joints around or adjacent to pile caps & grade beams. Install Strong around pile caps and grade beams above waterproofing. Wrap around all I-beams extending out of pile cap & encircle reinforcement out of pile cap.

Irregular Concrete Surfaces: Follow general instructions above. Press Strong against irregular contours filling cavities and cracks do not leave gaps between water bar and surface. It may prove necessary to install in an irregular direction to avoid major depressions or cracks.

Joining to PVC Waterstop: Follow general instructions above. Install Strong on the interior side of the PVC water bar place in direct contact and overlap the PVC water bar by at least 7.5 cm.

For detailed drawings and for other conditions contact S.T.Products Marketing Ltd.

Specification

The waterstop to be used in all construction joints shall be Strong or equal approved material. The waterstop shall consist of sodium bentonite in natural rubber and expand by at least 300%. It shall be capable of being butt ended, shall not be overlapped nor create a packing effect in the concrete, it shall be pliable so that it follows the contours of the concrete and may be installed to all penetrations. The material will form a positive seal, form a continuous waterstop and withstand hydrostatic pressure up to 70 m.

Packaging & Sizes

Standard size approximately :-
25x19 mm.x 5.0 LM
20x15 mm.x6.0 LM
20x10 mm.x9.0 LM
20x5 mm.x 13.0 LM
6 rolls per carton.

Primer/Adhesive : 5 litre plastic pails
1litre per 25-35 LM of standard profile 25x19 mm.

Delay Coating : 5 litre plastic pails
1 litre per 10-12 LM of standard profile 25x19 mm.

Storage & Shelf Life

Store dry in original boxes undercover protected from direct sunlight and rain. The shelf life is at least 12 months.

Health & Safety

There are no known hazards associated with Strong During normal use. Refer to product material safety data sheet.

Limitations

Standard **strong** should only be used in applications where ground water is not contaminated. In areas where saltwater or organic contaminated water is expected contact S.T.Products Marketing Ltd. for recommendations. Strong should be used in areas fully confined in concrete by a minimum of 75 mm cover. To achieve success the installation instructions should be followed. Any hydrated material should be allowed to dry before placement of concrete.

Strong is not effective on rough joint surfaces with many depressions because a complete seal may not be achievable for such surfaces.

Strong is not designed for use in expansion/movement joints or precast panel joints.

Technical service

The S.T.Products Marketing Ltd. Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

Contact Details

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