UNISWELL® SW47

HYDROPHILIC BUTYL RUBBER WATERSTOP



Product Features

UNISWELL® SW47 is a high-performance, flexible hydrophilic waterstop made from butyl rubber, for non-movement construction joints (new or existing) where it is fully contained within the joint. It swells on contact with water through hydrophilic groups that are part of the **UNISWELL® SW47** polymer structure. These groups are not extracted, so swelling performance is not lost through prolonged or repeated wetting.

As it expands, the waterstop presses against the faces of the concrete joint and fills irregular surfaces, voids and gaps, creating high contact pressure that stops water passing through the joint.

Unlike many other swellable waterstops, **UNISWELL® SW47** does not crack or fragment as it expands, so it does not break down in water or lose its swelling properties over time. Tested to MS 1583 for use in contact with drinking water.

SUITABLE FOR DRINKING WATER CONTACT
Tested to MS 1583 and cytotoxicity test · SPAN approved

Advantages

High-Performance & Flexible: Formulated from flexible butyl rubber as a high-performance hydrophilic waterstop for both new and existing non-movement construction joints.

Long-Term Swelling Performance: Integrated hydrophilic groups within the polymeric structure resist extraction and loss of swelling capacity, even with prolonged or repeated water contact.

Effective Water Sealing: Expands to fill irregular surfaces, voids, and joint gaps while creating high contact pressure against concrete faces to block water passage completely.

Structural Integrity During Expansion: Will not crack or fragment upon swelling, preventing material breakdown, pollution, or loss of long-term expansion properties over time.

Fields of Application

Water Tanks & Reservoirs	Basement & Underground Car Parks
Water & Sewerage Treatment Plants	Tunnels & Subways
Dam, Culverts & Spillways	Retaining Walls
Swimming Pools	Roof Decks & Podium Areas
Bund Walls	Lift Pits & Service Pits

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Technical Properties

Property	Test Method	Unit Measurement	Result
Service Temperature Range	In-House	°C	-30 to 50
Hardness	ASTM D 2240	SHORE A	16 ± 0.3
Tensile Strength	ASTM D638	MPa	0.14 ± 0.03
Elongation at Break	ASTM D638	%	850
Expansion Volume Rate	ASTM D471	%	>300
Hydrostatic Head Resistance	Hydraulic Rig Tester	m	70

*Hardness, tensile strength, elongation and expansion: typical results from independent laboratory tests on the UNISWELL® SW47 butyl compound (2025); test report available on request. Values subject to 5–15% tolerance.

Physical Properties

Material	:	Butyl Rubber & Hydrophilic Groups
Colour	:	Black
Size & Packing	:	**UNISWELL® SW47** 25mm x 19mm x 5m roll (6 rolls per carton, 30 metres) **UNISTICK® CA** 1 litre
Contact Adhesive Coverage	:	Approximately 20–30 m per litre

This technical data sheet is given in good faith and does not guarantee the application work.
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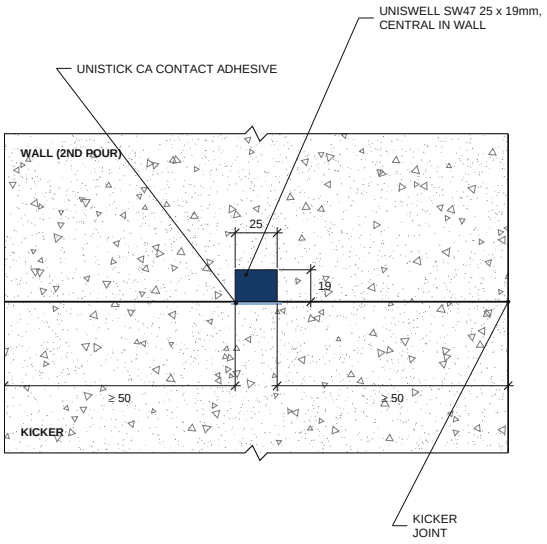
Typical Drawing & Applications

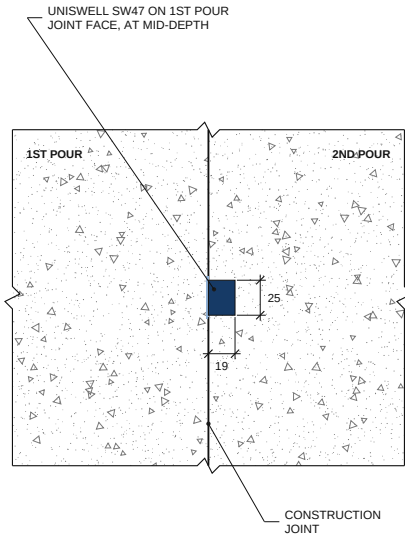
B KICKER JOINT

ENLARGED · NOT TO SCALE

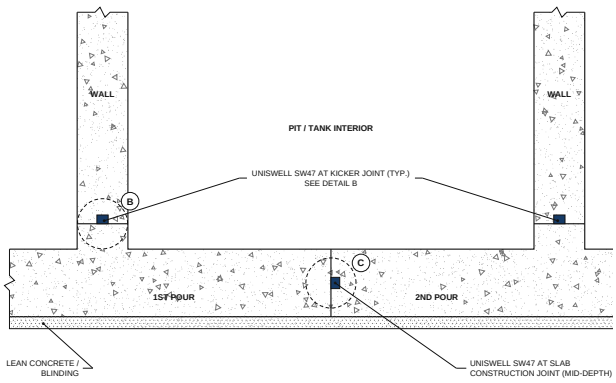


C SLAB JOINT

ENLARGED · NOT TO SCALE

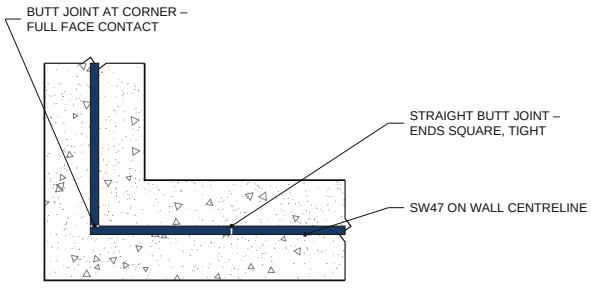


1 SECTION THROUGH BASE SLAB & WALLS



D JOINTS IN SW47 – PLAN

NOT TO SCALE



LEGEND

- Concrete – 1st pour
- Concrete – 2nd pour
- UNISWELL® SW47
- UNISTICK® CA adhesive
- Lean concrete

Illustrations only – not for construction. Refer to drawing UR-SW-02 and the project engineer.

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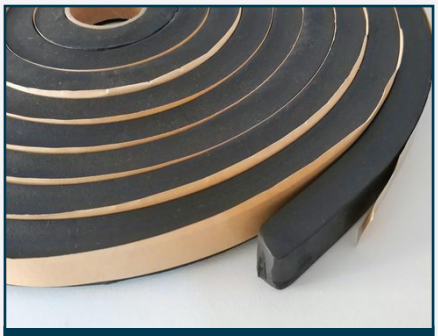
Water Immersion Test



UNISWELL® SW47 WATERSTOP



UNISWELL® SW47 WATERSTOP
EXPANSION TEST



UNISWELL® SW47 WATERSTOP
HIGH WATER ABSORPTION PROPERTY

Site Photos





Shelf Life & Storage

Store **UNISWELL® SW47** in its original sealed packaging in a dry, covered area, off the ground and away from direct sunlight, rain and standing water. As **UNISWELL®** is a hydrophilic material, keep it dry until installation, because premature contact with water or moisture will cause it to swell. Protect from dust, oil and contamination.

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Installation Procedures

1 Preparation | 2 Bonding | 3 Jointing | 4 Concreting

Step 1
PREPARATION

Long-term durability and performance can only be achieved with good preparation, so that water cannot bypass the waterstop.

The concrete should have a minimum compressive strength of 20 N/mm², with at least 50 mm of concrete cover in all directions around the waterstop.

The surface must be sound, smooth, clean and free from dust, oil, grease, organic growth and release agents. No groove is needed: SW47 is bonded directly onto the joint surface (kicker top or slab joint face) on the joint centreline. The surface must be level so that SW47 sits in full contact, with no gaps beneath.

Step 2
BONDING

Brush a continuous bed of **UNISTICK® CA** about 30 mm wide onto the prepared surface along the line of the waterstop. It is highly recommended to also apply a thin coat to the face of **UNISWELL® SW47** that will bond to the concrete.

Wait 5 – 30 minutes, depending on site conditions and surface porosity, for the solvent to evaporate, then press **UNISWELL® SW47** firmly into the adhesive.

Step 3
JOINTING

At joints and intersections, butt the ends of **UNISWELL® SW47** together neatly with full face contact. Do not overlap.

At pipe penetrations, wrap **UNISWELL® SW47** once around the pipe at the wall centre, bonded with **UNISTICK® CA**, with the ends butted together.

Step 4
CONCRETING

Place the second pour once the **UNISTICK® CA** has dried. Compact and vibrate the concrete well around the waterstop.

If **UNISWELL® SW47** has been exposed to water before the second pour, check it for early swelling. Replace any section that has swollen with a new length.

Important Notes

- For non-movement construction joints only. Do not use in expansion joints or in concrete sections less than 150 mm thick.
- Requires a minimum of 50 mm concrete cover from the face of the concrete.
- **UNISWELL® SW47** is surface-bonded with **UNISTICK® CA** – no groove is required. If nails or other mechanical fixings are also used, make sure the substrate is strong enough to hold them without damaging the waterstop.
- If **UNISWELL® SW47** has swollen before concreting, dry it out or replace it with a new length.

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