UNISWELL® SW20

HYDROPHILIC CHLOROPRENE RUBBER WATERSTOP



Product Features

UNISWELL® SW20 is a hydrophilic waterstop made from high-performance chloroprene rubber, for non-movement construction joints (new or existing) where it is fully contained within the joint. Hydrophilic groups are co-extruded with the chloroprene rubber as part of the **UNISWELL® SW20** polymer structure, and swell on contact with water.

The swelling creates a positive compression seal against the faces of the concrete joint and prevents water from entering the structure through the protected joint.

Unlike many other swellable waterstops, **UNISWELL® SW20** 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

Long-term durability and integrity
Unaffected even in repeated wet and dry cycles
Retains original shape after repeated contraction
No displacement or compacting problems in concrete
Prevents water leakage by absorbing moisture and swelling
Sustains effective seal in wet conditions. Permanently active
Easy to handle. No split formwork or site welding required
Slow expansion rate to prevent damage to freshly placed concrete during curing
Non-toxic, therefore suitable for use in waters in contact with human or marine life

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	45 ± 0.3
Tensile Strength	ASTM D638	MPa	4.67 ± 0.28
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® chloroprene compound; test report available on request. Values subject to 5–15% tolerance.

Physical Properties

Material	:	Chloroprene Rubber & Hydrophilic Groups
Colour	:	Black
Size & Packing	:	**UNISWELL® SW20** 20mm x 10mm x 10m / roll (8 rolls per carton, 80 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.
All Unity Reliance technical data sheets & method statements are updated on a regular basis and can be subject to change without notice.
It is the user's responsibility to obtain the latest version of the information required.

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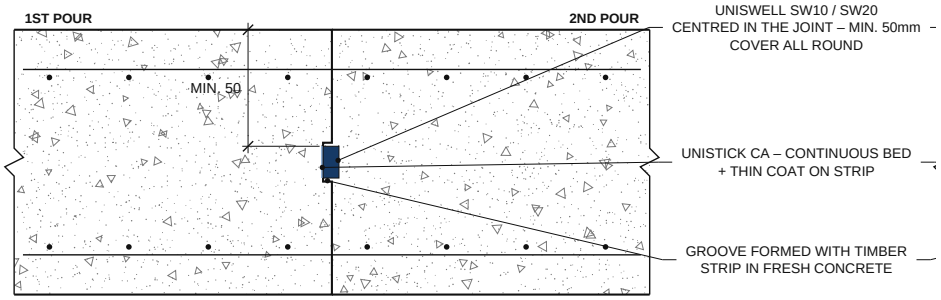
Typical Drawing & Applications

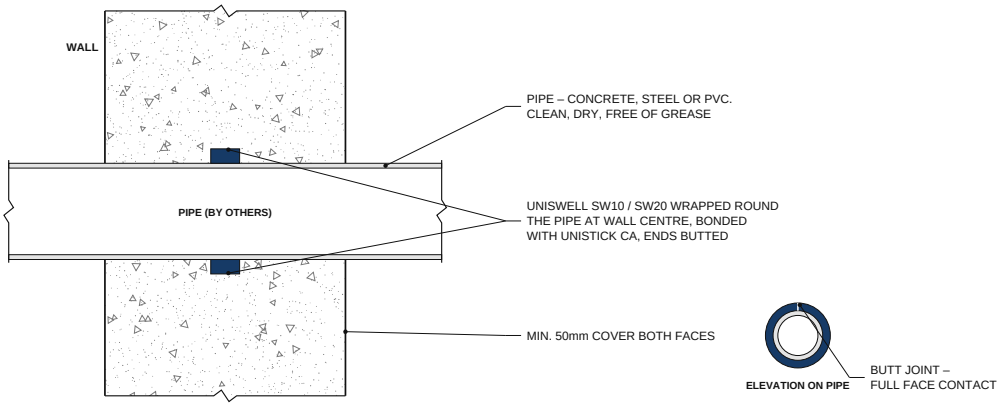
1 WALL TO WALL / SLAB TO SLAB JOINT

Same detail in plan or section · not to scale



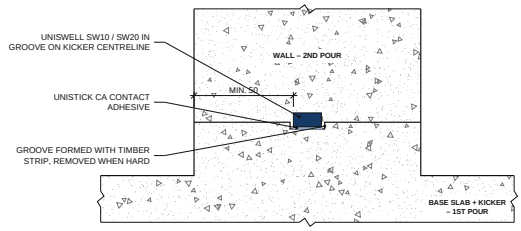
2 PIPE PENETRATION

Section through wall · not to scale



3 KICKER TO WALL JOINT

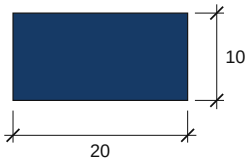
Section · not to scale



4 PROFILE

Enlarged · mm

UNISWELL SW20



Dimensions in mm (TDS).
Selection as per engineer · min. section 150mm.

LEGEND Concrete · UNISWELL® SW20 · UNISTICK® CA adhesive

Illustrations only – not for construction. Refer to drawing UR-SW-04 and the project engineer.

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Water Immersion Test



UNISWELL® SW20 WATERSTOP



UNISWELL® SW20 WATERSTOP
EXPANSION TEST



UNISWELL® SW20 WATERSTOP
HIGH WATER ABSORPTION PROPERTY

Site Photos





Shelf Life & Storage

Store **UNISWELL® SW20** 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. For fresh concrete, form a groove along the centreline of the joint with a timber strip, and remove it once the concrete has hardened so the waterstop can sit in the groove.

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® SW20** 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® SW20** firmly into the adhesive.

Step 3
JOINTING

At joints and intersections, butt the ends of **UNISWELL® SW20** together neatly with full face contact. Do not overlap.

At pipe penetrations, wrap **UNISWELL® SW20** 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® SW20** 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.
- A cast-in groove is the ideal way to fix **UNISWELL® SW20**. If nails or other mechanical fixings are used, make sure the substrate is strong enough to hold them without damaging the waterstop.
- If **UNISWELL® SW20** has swollen before concreting, dry it out or replace it with a new length.

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