UNITY
RELIANCE

UNISWELL™ SW20

HYDROPHILIC CHLOROPRENE RUBBER WATERSTOP

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PRODUCT FEATURES

UNISWELL™ SW20 is made of high-performance chloroprene rubber based hydrophilic waterstop suitable for non-movement construction joints (new or existing joints) where it is fully contained within the joint. The swelling action is the resultant between water and expanding hydrophilic groups co-extruded with chloroprene rubber which are part of the **UNISWELL™ SW20** polymeric structure. Expansion of the waterstop creates a positive compression seal against the face of the concrete joint and prevents water entry into the structure through the protected joint.

UNISWELL™ SW20 unlike many other swellable waterstop, will not crack and fragments when it expands. A waterstop that cracks while expanding will dissolve in water like clay and give rise to pollution and the hydrophilic expansion properties will be lost after a long period.

ADVANTAGES

- Long term durability & integrity
- Unaffected even in repeated wet and dry cycles
- Retains original shape after repeated contraction
- No displacement or compacting problems in concrete
- Prevent water leakage by absorbing moisture and swelling
- Sustains effective seal in wet conditions. Permanently active
- Easy to handle. No split forming or no welding at site 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

FIELD 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

TECHNICAL PROPERTIES

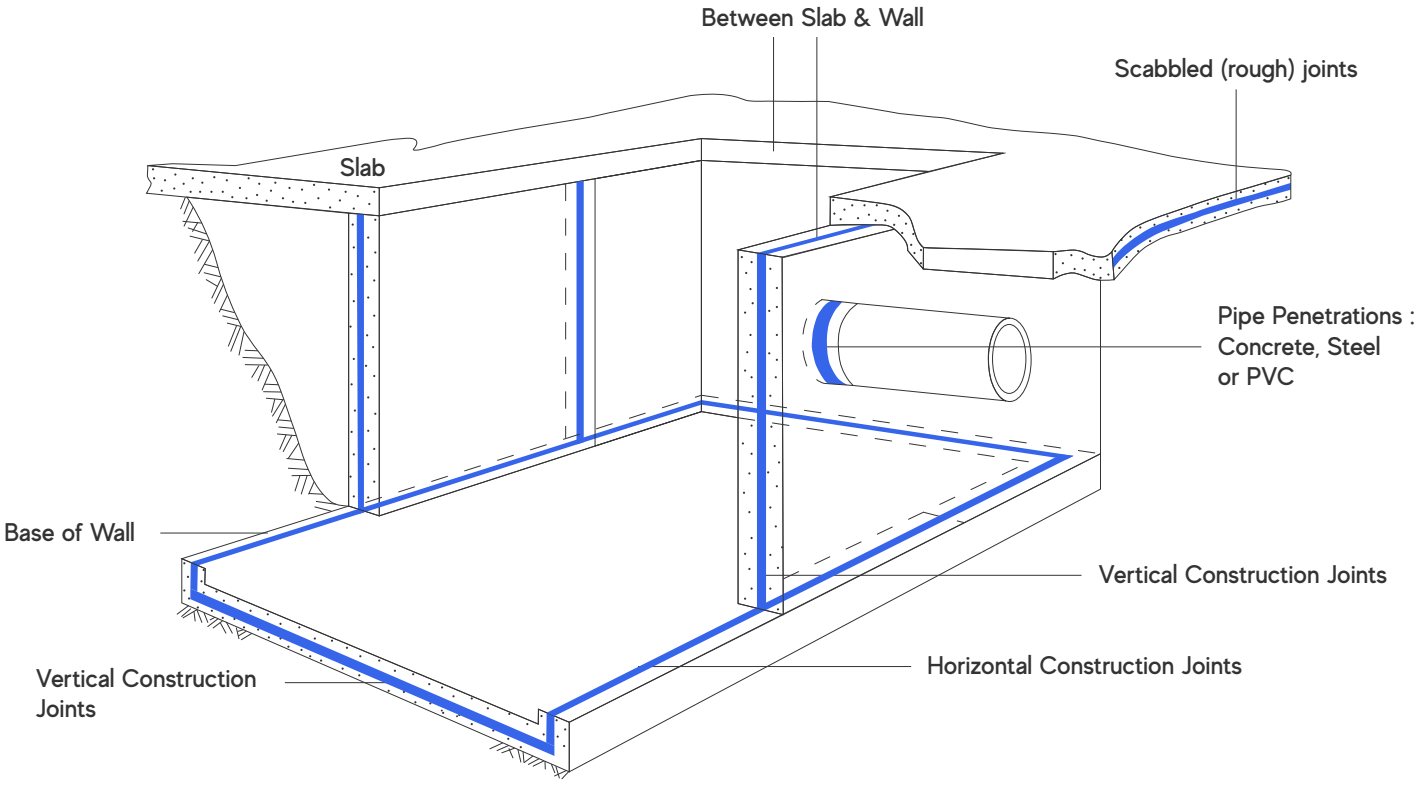
PROPERTIES	TEST METHOD	UNIT MEASUREMENT	RESULT
Service Temperature Range	In-House	°C	-30 to 50
Hardness	ASTM D 2240	SHORE A	45 ± 0.3
Tensile Strength	ASTM D638	MPa	4.67 ± 0.28
Elongation at Break	ASTM D638	%	850
Expansion Volume Rate	ASTM D471	%	>300
Hydrostatic Head Resistance	Hydraulic Rig Tester	m	70

(All tested & physical parameter values are subject to a 5 - 15% tolerance factor)

PHYSICAL PROPERTIES

MATERIAL	Butyl Rubber & Hydrophilic Groups
COLOR	Black
SIZE & PACKING	UNISWELL™ SW20 20mm x 10mm x 10m / roll (10 rolls per carton, 100 meters) UNISTICK™ CA 1 liter & 3.6 liters
CONTACT ADHESIVE COVERAGE	Approximately 20 - 30 meters per 1 liter

TYPICAL DRAWING



- SLAB TO SLAB JOINT
- SLAB TO WALL JOINT
- WALL TO WALL JOINT
- KICKER TO WALL JOINT
- PIPE PENETRATION JOINT

INSTALLATION PROCEDURES

- *PREPARATION*

  Long term durability and function can only be achieved with good preparation to ensure that water cannot by-pass the waterstop.

  It is recommended that concrete substrates shall have a minimum compressive strength of 20N/mm, and at least 50mm of concrete cover in all directions of the hydrophilic waterstop.

  Ensure that the concrete surfaces where the waterstop will be placed are smooth, clean and free from contamination such as dust, oil, grease, organic growth & release agents.

  For fresh concrete we recommended forming a groove in the middle of the joint using a suitable timber strip. After the concrete has hardened, remove the strip to reveal the groove in which the hydrophilic waterstop can sit with minimal preparation.

- *APPLICATION*

  Brush apply a continuous bed of **UNISTICK™ CA** onto the prepared substrate to a width of about 30mm along the proposed line of the waterstop.

  It is highly recommended to also apply a thin layer of **UNISTICK™ CA** to the side of **UNISWELL™ SW20** that will bond to the concrete.

  Wait for 5 - 20 minutes depending on the environment conditions, to allow the solvent adhesive to fully evaporate before firmly pressing the **UNISWELL™ SW20** together to bond with the adhesive.

  At joints and intersections, bring the two ends of **UNISWELL™ SW20** to butt join together neatly with full face contact, ensuring a tight join between the profiles.

  Placement of the s econd pour of concrete can be applied once the **UNISTICK™ CA** has dried. Upon pouring, make sure the concrete is properly compacted and vibrated around the **UNISWELL™ SW20**.

  If the **UNISWELL™ SW20** has been exposed to water before the second pour takes place, please check for pre-expansion. If the product has pre-expanded then remove that section and replace it with a new length of **UNISWELL™ SW20**.

SPECIAL NOTES

Cast-in concrete groove is ideal for fixing **UNISWELL™ SW20**. however, if mechanical fixing using nails (or) other means are envisaged, ensure that the substrate has sufficient strength to hold mechanical fixtures without damaging **UNISWELL™ SW20**.

Requires a minimum 50mm clear cover from the face of concrete.

If premature swelling has taken place, dry out or replace a new length of the **UNISWELL™ SW20** before fresh concrete pouring.

Should not be used in expansion joints or concrete sections that less than 150mm wide.

WATER IMMERSION TEST

UNISWELL SW20 WATERSTOP

UNISWELL SW20 WATERSTOP EXPANSION TEST

UNISWELL SW20 WATERSTOP HIGH WATER ABSORPTION PROPERTY

SITE PHOTOS

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