

# Idrostop SW

## A hydrophilic, expandable, butyl rubber, waterstop

### WHERE TO USE

**Idrostop SW** is suitable for use in horizontal and vertical construction joints as a waterstop for cast in-situ concrete for civil, industrial and hydraulic construction.

### Some application examples

- Joints between concrete slab and retaining walls.
- Joints between different building materials, e.g. steel and concrete, stone and concrete.
- Joints between different types of materials, e.g. PVC or steel pipes running under poured concrete in swimming pools, sewage-treatment tanks, reservoirs, and hydraulic projects.
- Cold joints (temporary shrinkage joints) created during pouring to reduce the risk of cracking in long or monolithic structures.
- Construction joints where conventional waterstops cannot be installed easily and securely because of congested reinforcements.
- Construction joints in tunnels, dams and hydraulic projects including reservoirs for potable water.
- Joints for new to old concrete.
- Joints for underground structures.

### TECHNICAL CHARACTERISTICS

**Idrostop SW** is a pre-formed, flexible, hydrophilic, butyl rubber waterstop which expands when in permanent

contact with water, creating a self-healing, joint waterstop. **Idrostop SW** does not swell prematurely; this feature helps minimize expansion should the joint become ponded with water for short periods. It will not absorb water from freshly poured concrete and its controlled expansion means that it will not swell against the fresh concrete during the setting stage.

**Idrostop SW** swells by more than 70% of its original size and its swelling properties are unaffected by repeated wet and dry cycles. Unlike clay-based products it will not expand until break-up.

**Idrostop SW** has been tested to withstand 60 metre head of water pressure.

**Idrostop SW** is non-toxic, making it suitable for use in structures containing water for human consumption and marine life.

Salt and contaminated water may affect the expansion rate of **Idrostop SW**.

**Idrostop SW** is available in 2 sizes, 20x15mm and 25x19mm.

### RECOMMENDATIONS

- Do not install **Idrostop SW** if the structure is immersed in water at the time of application.
- Do not use **Idrostop SW** for movement joints or at joint faces where excessive shrinkage is expected.

TECHNICAL DATA (Typical values)	
<b>PRODUCT IDENTITY</b>	
Form	pre-formed strip
Colour:	black
Available sizes:	20x15 mm ( <b>Idrostop SW 300</b> ) 25x19 mm ( <b>Idrostop SW 475</b> )
Density (ASTM D-71) (g/cm <sup>3</sup> ):	1.40 – 1.45
Solubility in water:	insoluble
Principle properties:	expands when in permanent contact with water
Penetration (cone @ 77F,150gm, 5 sec according to ASTM D-217):	40±5
<b>APPLICATION DATA</b>	
Application temperature (°C):	from -20 to +50
Service temperature (°C):	from -30 to +80
Waiting time before pouring concrete if the installation has been carried out with <b>Idrostop SW Contact Adhesive</b> (hrs):	4-12
Waiting time before pouring concrete if the installation has been carried out using screws/nails (hrs):	no waiting time required
Consumption of <b>Idrostop SW Contact Adhesive</b> (metres of <b>Idrostop SW</b> per litre):	approximately 25
<b>FINAL PERFORMANCES</b>	
Expansion in water (%): -after 7 days: -after 14 days: -after 28 days: -after 56 days:	approximately 115 approximately 130 approximately 140 approximately 175
Impermeability:	up to 6 bars

- **Idrostop SW** cannot be used if the surface of the installation is heavily contaminated with acids or solvents. Clean the surface thoroughly and consult Mapei Technical Service.
- **Idrostop SW** must be installed with a minimum concrete cover of 50mm. For lightweight or low-strength concrete the cover needs to be increased. Contact Mapei Technical Service for advice.

## APPLICATION PROCEDURE

### Preparing the substrate

The surface of the concrete must be sound, clean and free of dirt, dust, oils and any contaminant which may affect adhesion. Remove cement laitance and any deposits that may have been left during concrete pouring.

### Installation

**Idrostop SW** can be applied on concrete, metal, PVC and natural stone with **Idrostop SW Contact Adhesive**, a ready-to-use, single-component, rubber-based adhesive. **Idrostop SW Contact Adhesive** is available in 1-litre and 3.6-litre cans.

Brush one coat each of **Idrostop SW Contact Adhesive** on the surface of **Idrostop SW** and on the concrete to a width of about 30mm. Let the adhesive dry for 10-20 minutes to tacky condition (depending on weather conditions) before positioning **Idrostop SW**. Press the **Idrostop SW** onto the substrate, applying downward pressure along the strip to ensure full contact without stretching and putting tension in the strip. For rougher surfaces, greater pressure may be needed to achieve full contact.

At joints and intersections, bring the two ends of **Idrostop SW** to butt together neatly with full face contact and knead to form a continuous line.

To facilitate application on vertical and overhead surfaces, it is recommended to secure **Idrostop SW** with nails while the **Idrostop Contact Adhesive** is still tacky. **Idrostop SW** must be pressed onto the fresh adhesive to make it adhere. This precaution makes installation fast and secure, eliminating any potential dislocation caused by the weight of the strip.

Remove the protective paper on **Idrostop SW** before the concrete pour.

In the event of heavy rain before the concrete pour takes place, **Idrostop SW** needs to be checked for pre-expansion. Pre-expanded sections need to be removed

and replaced with new sections of **Idrostop SW**.

Wait 4-12 hours after application of **Idrostop SW Contact Adhesive** before pouring the concrete, depending on ambient conditions. Make sure that the concrete is properly compacted around **Idrostop SW**.

### Cleaning

Wet **Idrostop SW Contact Adhesive** can be removed from tools with common solvents (eg. toluene). Once **Idrostop SW Contact Adhesive** has set, it can only be removed mechanically.

### CONSUMPTION

Approximately 1-litre of **Idrostop Contact Adhesive** is needed per 25 metres of **Idrostop SW**.

### PACKAGING

**Idrostop SW** is available in 2 sizes:  
 - **Idrostop SW 300** (20x15 mm): 7.5 m roll  
 - **Idrostop SW 475** (25x19 mm): 5 m roll

### STORAGE

**Idrostop SW** can be stored for 12 months in a dry place at temperatures between +10°C and +40°C.

### SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

For further and complete information about the safe use of our product please refer to our latest version of the Material Safety Data Sheet

PRODUCT FOR PROFESSIONAL USE.

### WARNING

*Although the technical details and recommendations contained in this data sheet correspond to the best of our knowledge and experience, all the above information must, in every case be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.*

Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.com](http://www.mapei.com)

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**

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