

Idrostop

Hydrophilic, Expandable, Pre-Formed, Flexible
Rubber Strip for Watertight Construction



DESCRIPTION

Idrostop[™] is used to produce watertight construction joints in civil, industrial and hydraulic construction. Construction joints created with *Idrostop* are watertight up to 5 atm of pressure (hydrostatic pressure head of 169.5 feet or 51.7 m). Unlike materials made of alternate composition that lose efficiency in repeated wet/dry cycling, *Idrostop*'s unique composition allows it to maintain performance even in aggressive environments.

FEATURES AND BENEFITS

- *Idrostop*'s pre-formed flexible strip features an acrylic polymer base specially designed to form watertight construction joints up to a hydraulic pressure of 5 atm (hydrostatic pressure head of 169.5 feet or 51.7 m)
- Bentonite-free
- Expands gradually in permanent contact with water, creating an active barrier against positive and negative water pressure
- Maintains its properties even in the presence of aggressive water such as saltwater (seawater), and water in sewage treatment plants and sewers
- Stable at temperatures between -22°F and 122°F (-30°C and 50°C)

WHERE TO USE

- Dams, canals, aqueducts and locks
- Culverts

- Tunnels
- Storage tanks and cisterns
- Water and wastewater treatment plants
- Pools
- Retaining walls
- Foundations
- Grade-level slabs
- Penetrations of pipes and conduits
- Buildings and other structures where water intrusion is a concern

Idrostop is suitable for both retrofit and new construction projects. It can be used for a variety of applications such as the following:

- For waterproofing joints between concrete foundations and walls
- For waterproofing contact joints between different building materials, such as steel and concrete, or stone and concrete
- For waterproofing contact joints between different types of materials, such as PVC or steel tubing penetrations in concrete swimming pools, sewage-treatment tanks, dams, and hydraulic projects in general
- For waterproofing foundation rock-structure interfaces and construction joints in tunnels, dams and hydraulic structures where conventional waterstops cannot be installed easily or securely due to surface irregularities or congestion of reinforcement or anchor placements
- For waterproofing cold joints (temporary shrinkage joints) created during pouring to reduce the risk of cracking in long or monolithic structures
- For waterproofing construction joints where conventional waterstops cannot be installed easily or securely because of highly congested reinforcing bar

SUITABLE SUBSTRATES

- Concrete
- A variety of building materials in direct contact with concrete, including steel, PVC, stone and clean rock

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- Ensure that the surface of the concrete is clean and solid when *Idrostop* is installed.
- Mechanically remove any cement laitance and drops of mortar left on the surface from concrete pouring. Vacuum substrate using a brush attachment to eliminate debris and dust to provide a clean, dust-free surface.
- *Idrostop* can even be applied on slightly damp surfaces, when affixed mechanically or with an MS-polymer-based adhesive.

PRODUCT APPLICATION

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details. Read all installation instructions thoroughly before installation.

Installation with adhesive

1. Apply *Idrostop* on concrete, metal, PVC and natural stone with an MS-polymer-based cartridge adhesive.
2. Cut the cartridge nozzle on a 45-degree angle and with a 3/16" (5 mm) opening size. Insert the cartridge into a standard caulking gun and extrude the adhesive evenly onto the surface of a section of *Idrostop* that has been pre-cut to the appropriate length, or apply adhesive directly onto the concrete.
3. Press the *Idrostop* strip onto the substrate, moving it slowly in all directions to ensure full contact and thorough adhesion.
4. Forming corners or seams does not require any special procedure. Simply align the pieces of *Idrostop* so that they are in complete contact with each other. Their subsequent expansion will ensure a perfect seal against water pressure.
5. To facilitate application on vertical surfaces, cut *Idrostop* into strips measuring 3.3 feet (1 m) long. This precaution makes installation fast and secure, eliminating any potential sliding caused by the weight of longer strips. Longer strips can be installed by mechanically attaching the top end of the *Idrostop* with screws or nails and extruding a line of adhesive directly onto the substrate.
6. Press *Idrostop* strip onto the fresh adhesive to achieve proper adhesion.

Installation with screws/nails

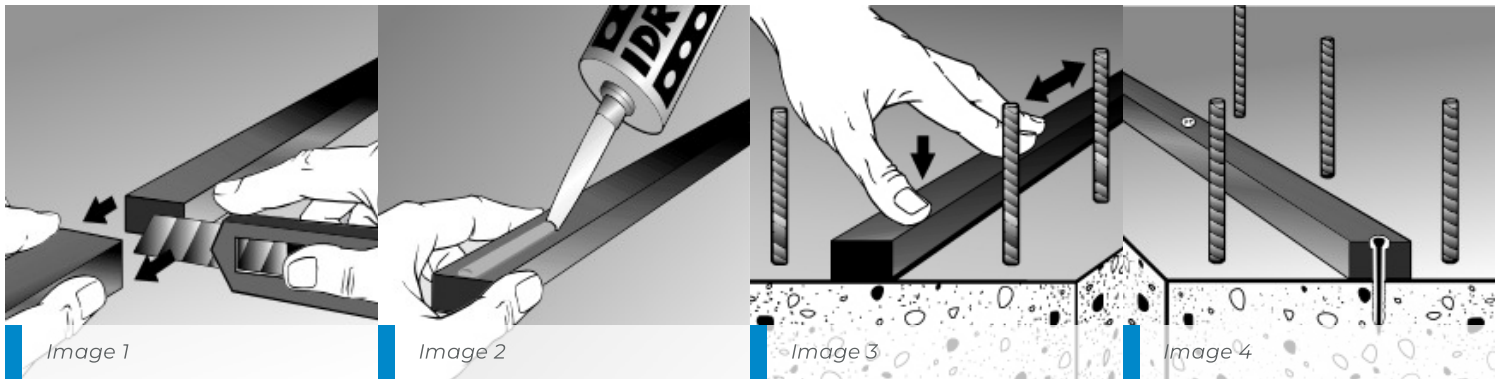
1. Alternatively, solely attach *Idrostop* mechanically with screws or nails placed in a row along the strip, spaced not more than 10" (25 cm) apart, to ensure thorough contact with the substrate.

Pouring concrete

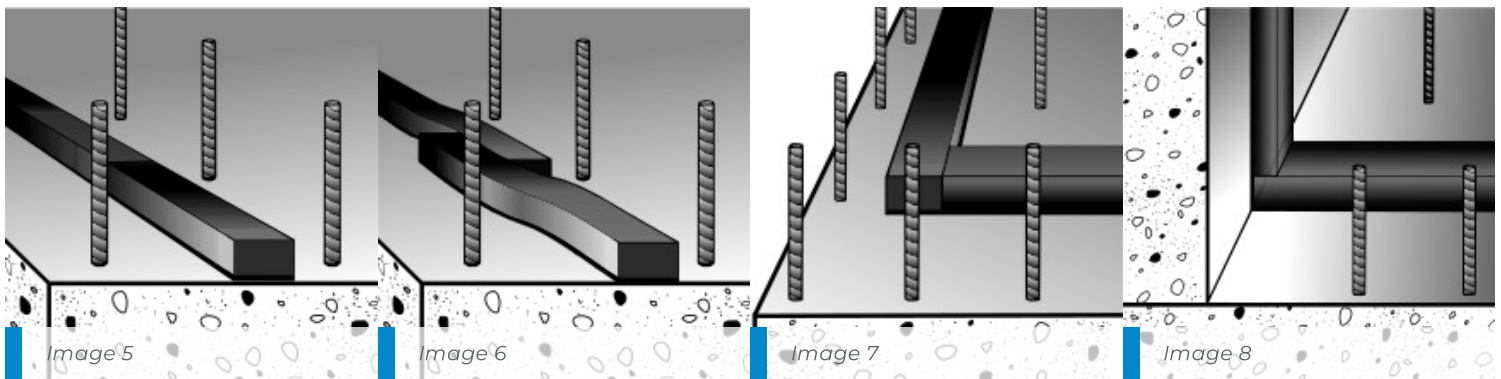
1. If *Idrostop* has been attached mechanically with screws or nails, concrete may be poured immediately after the installation.
2. If *Idrostop* has been attached with an adhesive, wait 24 hours before pouring concrete. Wait time can be shortened, if necessary, but wait no less than 4 hours to allow sufficient adhesion of the adhesive.
3. If concrete will be poured after adhesive has dried only 4 hours, nails or screws must be placed every 3.3 feet (1 m) to prevent the *Idrostop* from moving during the pour.
4. Ensure that *Idrostop* is positioned so that the concrete cover is at least 3" (7.5 cm) wide.

LIMITATIONS

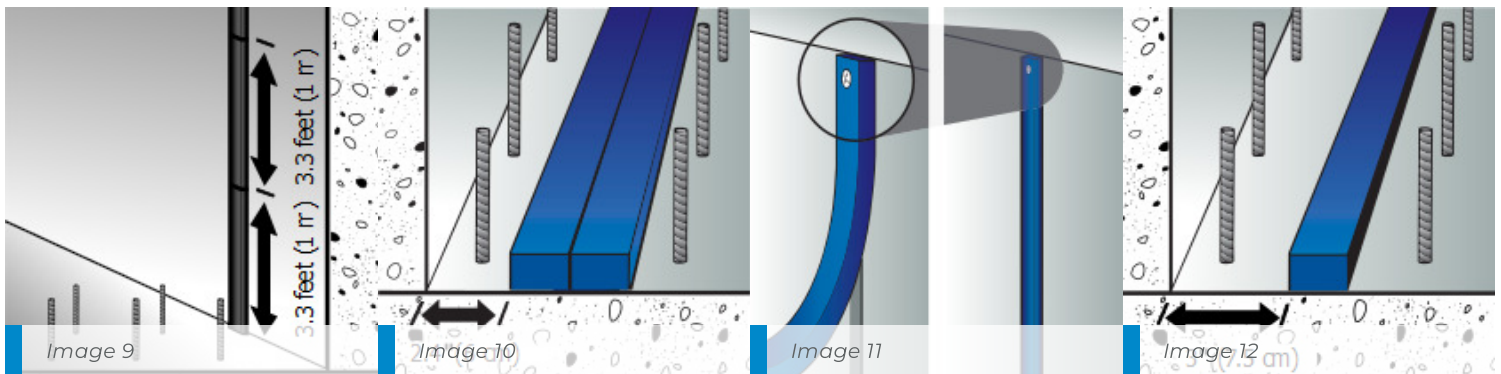
- Do not install if the structure is immersed in water at the time of application. Remove any freestanding water from the surface and wait several hours to ensure that there is no ponding of water on the surface before installing the strip.
- After installation, ensure that proper precautions are in place to protect the joint from exposure to water (such as rainwater, groundwater and other moisture) until it is encased in concrete.
- *Idrostop* is best suited for site-formed concrete joints with limited expected movement. It prevents water migration by forming a compressive seal within the joint via expansion. However, excessive displacement in the joints can weaken this seal and reduce its effectiveness.
- Do not use if the surface of the installation is heavily contaminated with acids or solvents. If this is the case, clean the surface thoroughly and consult MAPEI's Technical Services Department.



- Image 1: Cut the *Idrostop* strip to the desired length.
- Image 2: Apply the MS-polymer-based adhesive evenly on the *Idrostop* or directly to the substrate.
- Image 3: Firmly press *Idrostop*, moving it in all directions to make it adhere well.
- Image 4: *Idrostop* can be placed also with screws or nails. Place nails every 10" (25 cm).



- Image 5: In-line joint – butt jointing of two pieces of *Idrostop*
- Image 6: In-line joint – the two ends are staggered with an overlap of 0.8" to 1.2" (2 to 3 cm) for a better seal.
- Image 7: Horizontal corner joint
- Image 8: Corner joint between floor and wall



- Image 9: For application on vertical surfaces, install the gasket in lengths of about 3.3 feet (1 m).
- Image 10: Where two strips of *Idrostop* are used side by side, 2.4" (6 cm) of concrete is sufficient to protect the gasket.
- Image 11: Pieces longer than 3.3 feet (1 m) can be installed on vertical surfaces by fixing the top of the pieces with a nail or pin and then extruding the MS-polymer-based adhesive directly onto the underlying substrate.

- Image 12: Width of concrete to protect *Idrostop*

Product Performance Properties

Customs classification (HTS code)	USA: 4008 11 5000; Canada: 4008 11 9029
Hazard classification	Not controlled under OSHA and WHIMS
Specific gravity	1.30 at 68°F (20°C)
Solubility in water	Insoluble
Corrosiveness	Noncorrosive
Expansion in water	
After 24 hours	About 45%
After 2 days	About 70%
After 3 days	About 82%
After 7 days	About 120%
Impermeability	Up to 5 atm (hydrostatic pressure head of 169.5 feet or 51.7 m)
Elongation – ASTM 638 M89	70% to 100%
Shore hardness – ASTM D2240	25 to 35

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Shelf Life and Product Characteristics

Format	Pre-formed strip
Application temperature range with an MS-polymer-based adhesive	50°F to 104°F (10°C to 40°C)
Adhesive coverage needed	About 8.5 U.S. oz. per 33 linear feet (250 mL per 10 linear meters) of <i>Idrostop</i>
Shelf life	3 years in original, sealed packaging when stored in a dry place at 41°F to 95°F (5°C to 35°C)

CSI Division Classification

Concrete Waterstops	03 15 13

Packaging

Box of <i>Idrostop 5</i> : six 65-ft. (20-m) rolls, each measuring 3/4" x 3/16" (20 x 5 mm)
Box of <i>Idrostop 10</i> : six 32.8-ft. (10-m) rolls, each measuring 3/4" x 3/8" (20 x 10 mm)
Box of <i>Idrostop 25</i> : six 16.4-ft. (5-m) rolls, each measuring 1" x 3/4" (25 x 20 mm)

ADDITIONAL INFORMATION

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. Please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

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For the most current product data and BEST-BACKEDSM warranty information,
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