

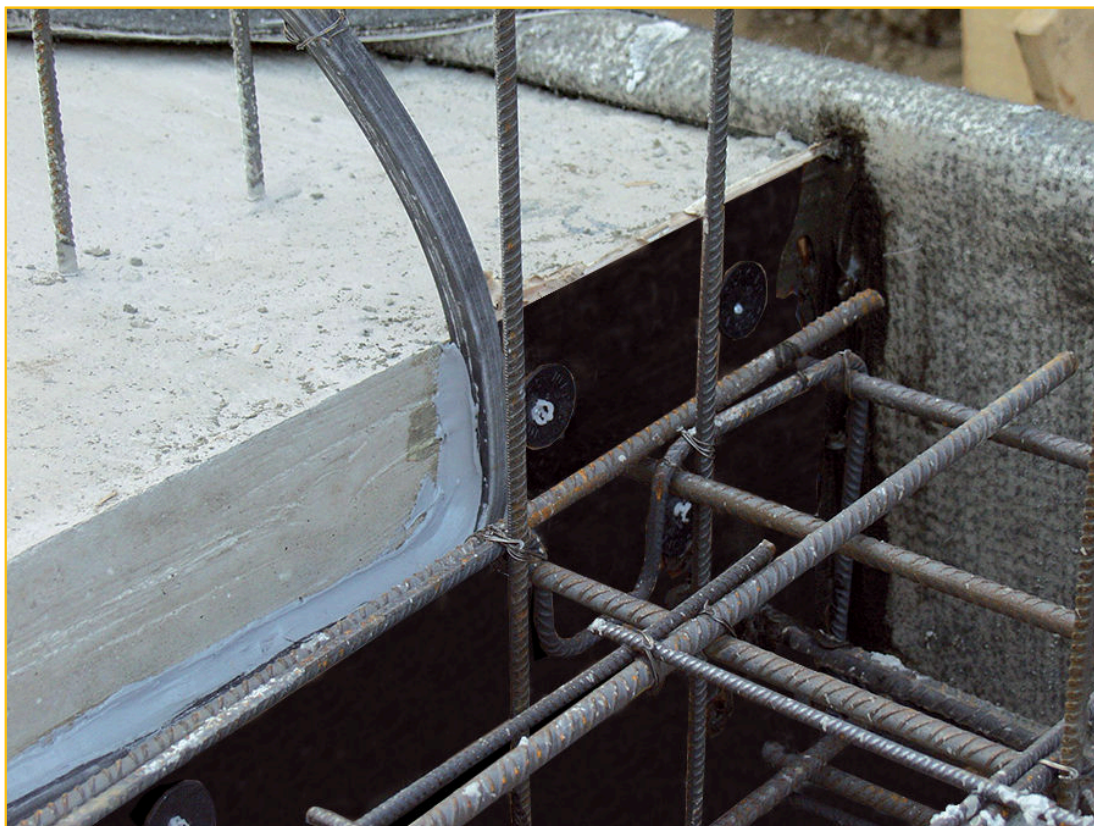


WT EXPANSION

PRODUCT DESCRIPTION

WT EXPANSION is a hydro-expansive gasket based on AMPHIBIA copolymer in EPDM with high resistance to hydraulic load that creates an excellent seal of expansion and contraction joints, including deteriorated, in any reinforced concrete structure.

Thanks to its great flexibility, it can also be applied to particularly articulated or irregular structures.



PRODUCT APPLICATION

- To seal expansion and contraction joints in every kind of reinforced-concrete structure (rooms, underground, channels, tanks, pools, etc)
- To set-up seals between reinforced concrete or metal prefabricated elements for hydraulic works
- To set-up seals for reinforced concrete or metal piping

ADVANTAGES

- Perfect hydraulic water-tightness
- High resistance to hydraulic load
- Non-toxicity and respect for the environment
- Great flexibility of use
- Easy and quick application

PREPARATION AND APPLICATION The profile laying surfaces must be dry, clean and free of dust, oil, release agent and loose parts. Temporarily apply a wooden strip (20 mm thick) placed along the application line, secured with nails to facilitate and support the profile until it has been bonded in order to promote laying, especially at temperatures $<15^{\circ}\text{C}$ and humidity $>60\%$.

Then remove the strip.

Proceed by sections, applying individual bars of WT EXPANSION one after the other.

Use BI MASTIC adhesive (see relevant technical data sheet) in the presence of the support strip.

Otherwise use ULTRABOND adhesive, mix thoroughly before use and apply a thin, even layer of glue on both surfaces by means of a fine-toothed spatula (1 mm) or brush.

In case of porous application surface, apply a second layer of adhesive once the first has dried (10 - 30 minutes).

Proceed with gluing the profile once the surfaces of both sides are dry to the touch (10 - 30 minutes).

Place the profile in the correct position and join it to the surface by applying strong pressure by means of hammer blows.

The drying time may vary depending on the type of surface, the amount of product used and the temperature ($\geq +10^{\circ}\text{C}$) and humidity ($\leq 65\%$).



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The WT EXPANSION profiles must be applied with a minimum coating of 10 cm of reinforced concrete. The profiles must be butt sealed and joined with hot air gun at 400°C or by bonding with AKTI-VO 201 (see relative data sheet).

For an open-section structural joint, place a suitable separating layer in the joint interface, inside the WT EXPANSION profile (check the maximum initial opening depending on the profile section chosen); on the part outside the WT EXPANSION profile, apply WT PANEL (see relative technical data sheet and technical diagram) in one or more layers staggered one from another until the desired initial opening is reached, thus also waterproofing the joint interface.

Watch the product video

YOUTUBE VIDEO



How it works

When in contact with water, the WT EXPANSION profiles can be hydrated until the hydrophilic polymer is saturated, thereby doubling the initial volume.

This guarantees a perfect watertight seal at the structural joints that are subjected to hydrostatic load.

If the water presence is not constant, the WT EXPANSION firmly maintains the expanded size.

The profile slowly loses the previously absorbed water molecules if placed in an environment without humidity, thereby returning to its original size.

When the product comes into contact with water once again, the expansion phenomenon is repeated with the same characteristics.

Thanks to the chemical stability of the product, this phenomenon can be repeated without losing its expansion and pressure characteristics.

Selection guide

In order to use WT EXPANSION profiles correctly, it is necessary to know that a perfect watertight seal is directly related to the pressure exerted by the profiles on the confinement walls and their level of interconnection.

A joint must be created on one of the side of the WT EXPANSION hydro-expansive profiles, in order to prevent them from being expelled by the hydrostatic pressure before they swell.

The required size of the profile is selected according to the maximum linear movement of the joint (considering shrinkage phenomena, thermal movement of the concrete and possible differential settlement) and to the initial opening of the joint that is to be created during implementation.

| Type of profile | Dimensions | Max initial opening | Further consecutive movement up to a hydraulic pressure of 100 KPa | Type of use |
|-----------------|------------|---------------------|--|-------------------|
| WT E 20.20 | 20X20 mm | 10 mm | 5 mm | Structural joints |
| WT E 30.30 | 30X30 mm | 20 mm | 10 mm | Structural joints |



References available at www.volteco.com



WT EXPANSION

PACKAGING AND STORAGE

The WT EXPANSION profiles are packed in boxes containing:
WT E 20.20: contents per box 10.80 m = 9 bars of 1.20 m each.
WT E 30.30: contents per box 4.80 m = 4 bars of 1.20 m each.
The products must be stored in a dry place protected from sun and humidity.

WARNINGS - IMPORTANT NOTES

The joint must guarantee that the profile remains in place during the subsequent casting.
The WT EXPANSION profile must be used on structures thick enough to ensure a minimum reinforced concrete coating of 10 cm on the sides.
PLEASE NOTE: Contact the Volteco Laboratory for any preventive tests when applying the product in the presence of water with a high salt concentration.

PHYSICAL AND TECHNICAL SPECIFICATIONS

| Specification | Values |
|---|--------------------------|
| Specific weight | 1.02 g/cm ³ |
| Application temperature | -15°C +50°C |
| Colour | black |
| Parameters subject to company Quality Control | - |
| Dimensions | 20x20 mm / 30x30 mm |
| Expansion due to contact with water (7 days) | > 200% |
| Hydraulic seal on 10 mm joint | No passage up to 400 kPa |

SAFETY

Refer to the related Safety Data Sheet.

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Note for buyer/installer:
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It may vary and the installer is therefore required to update his/her information prior to each application by referring to www.volteco.com.
The above clarifications extend to the pre-post-sales technical/commercial information of the commercial network.

ANNEXES



WT EXPANSION

