



Description

Delta Amphibia WT Expansion is a hydro-expansive waterstop used to seal contraction and expansion joint(s) including deteriorated, in any reinforced concrete structures.

Delta Amphibia WT Expansion has a high resistance to hydraulic loads, creating the optimal sealing of expansion and contraction joints. When Delta Amphibia WT Expansion contacts with water, the profiles can be hydrated until the hydrophilic polymer is saturated, thereby doubling the initial volume. This guarantees a perfect watertight seal at the structural expansion joints that are subjected to hydrostatic load. If the water presence is not constant, Delta Amphibia 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 Delta Amphibia WT Expansion, this phenomenon can be repeated without Delta Amphibia WT Expansion losing its expansion and pressure characteristics.

Delta Amphibia WT Expansion is flexible, offering conformability to intricate details.

Features

- Forms an impermeable barrier against water in concrete
- High resistance to hydraulic loads
- Safe to use, non-toxic
- Highly flexible
- Easy and straightforward application

Associated Products

- Delta Amphibia Membranes
- Delta Amphibia WT Panel
- Delta Amphibia AKTI-VO 201
- Delta Amphibia BI Mastic

Product Details

DMS 1045 – Delta Amphibia WT Expansion 20mm x 20mm
DMS 1046 – Delta Amphibia WT Expansion 30mm x 30mm

Specification

- BS 8102:2022 Protection of below ground structures against water ingress. Code of practice.
- NBS J40 / 130 – Flexible Sheet Tanking / waterproofing
- NBS E40/320 Hydrophilic waterstops

Fields of Application

- To seal expansion joints
- To seal contraction joints/control joints
- To seal between prefabricated elements – such as reinforced concrete and metal
- To seal connection points between two concrete, cement, or similar structures



PRODUCT DATA SHEET

Delta Amphibia WT Expansion

Technical Data

Type of Profile	Dimensions	Max initial opening	Further consecutive movement up to a hydraulic pressure of 100 KPa	Type of use
Delta Amphibia WT Expansion 20mm x 20mm	20x20mm	10mm	5mm	Expansion and contraction joints
Delta Amphibia WT Expansion 30mm x 30mm	30x30mm	20mm	10mm	Expansion and contraction joints

Specifications	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

The data reported are obtained in the laboratory at +20°C and 60% R.H. (relative humidity).

Installation

Substrates should be clear of dust, oil, and loose materials. Apply a temporary wooden batten along the proposed application line to facilitate straight laying of the profile and to support the profile during the curing process. Temporary wooden battens can be removed once the product has cured. Proceeding in small sections, to create a robust bond, apply a thin layer of Amphibia Bi-Mastic to the larger side of Delta Amphibia WT Expansion profile and on the application surface. Apply Delta Amphibia WT Expansion to substrate and press in place.

In the case of uneven or damp application surfaces, Delta Amphibia BI Mastic or AKTI-VO 201 hydro-expanding mastic can be used to even out the application surface and bond the profiles. Delta Amphibia WT Expansion profiles must be applied with a minimum coating of 100mm of reinforced concrete. Profiles must be butt sealed and joined with a heat gun at 400°C or by bonding with AKTI-VO 201. For an open section expansion joint, place a suitable separating layer in the joint interface, inside the Delta Amphibia WT Expansion profile (check the maximum initial opening depending on the profile section chosen); on the part outside the Delta Amphibia WT Expansion profile, apply Delta Amphibia WT Panel (please refer to Delta Amphibia WT Panel Product Data Sheet and installation manuals for technical diagrams) in one or more layers staggered one from another until the desired initial opening is reached, waterproofing the joint interface.

Please refer to Delta's Installation Guides. Installation Guides can be found at www.deltamembranes.com/technical/delta-installation-guides/. We have a number of "How to" subject related video guides available on your Youtube Channel and Website. Please visit www.deltamembranes.com/technical-categories/the-video-suite/

Other Information

All data and information contained in these Product/Technical Data Sheets is up-to-date and correct as at the date of issue. The information given is suggested as guidance and should only be used for evaluating your specific application. Delta Membrane Systems Limited cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. The information contained in these Product/Technical Data Sheets should not be considered a warranty, expressed, or implied, including but not limited to a warranty of merchantability or fitness for a particular purpose. In no event shall Delta Membrane Systems Limited be liable for any incidental or consequential damages resulting from the use, misuse, or inability to use the product. This exclusion applies regardless of whether such damages are sought based on breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory. When in doubt, contact Delta's Technical Team on 01992 523 523.

Packaging

DMS 1043 Supplied in 3 rolls of 5m (15m complete).
DMS 1044 Supplied in 4 bars of 1.2m (4.8m complete).

Storage

- Store safely and keep out of reach of children
- Always store and transport in a secure position
- Store in a dry location protected from direct sun light and humidity

Product Selection Guide

In order to use Delta Amphibia 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 sides of the Delta Amphibia 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 should be selected in according to the maximum linear movement of the joint (considering shrinkage and thermal movement of concrete and possible differential settlement) and to the initial opening of the joint that is to be created during implementation.

Safety

Always follow the instructions provided in the material safety data sheet and take the precaution described there. Wear appropriate Protective Personal Equipment (PPE) when applying and using the material. Observe all governmental, state, and local safety regulations when processing the material.

Delta Amphibia WT Expansion profile must remain securely in place during subsequent casting/pour.

Delta Amphibia WT Expansion profile should be used on horizontal surfaces that are thick enough to guarantee a minimum reinforced concrete coating of 100mm on the sides.

Do not use nails to apply Delta Amphibia WT Expansion profile.

Adequate training is required before industrial or professional use.

