BUILDING COMMON GROUND

MAX FRANK®

Cresco® BT and Cresco® GR
FAQ

Cresco® expanding waterstops are particularly used for difficult joint geometries. These prevent the penetration of water in the construction joints of impermeable concrete structures. When water enters, the swelling process begins and creates a sealing effect. Our Cresco® GR is a rubber-based swelling tape which remains stable in its form and the sealing is achieved by the increase in volume and the swelling pressure. The bentonite-based swelling tape Cresco® BT also expands into cavities and cracks due to its volume increase.

Advantages

- Long-lasting expansion capacity
- Excellent dimensional stability
- Controlled limited expansion
- Reliable solution for pipe sealing
- Suitable for water exchange zones
- Tested up to 5.0 bar water pressure (usable according to General Building Test Certificate up to 2.0 bar)
- German National Approval

Can swelling tapes be used in reinforced concrete components in contact with the groundwater?
Yes, see certificate of usability (AbP).

Can swelling tapes be used in the sense of the WU guideline?
Yes, Cresco® swellable tapes meet the requirements of the WU guideline regarding the usability of swellable tapes (10.1 Rules of Application). Verification by a functional test of the TU Munich according to PG-FBB. The usability explicitly applies to all stress classes (soil moisture, water freely running off the wall, permanently or temporarily pressing water) and all use classes.

Is there an approval for the use in LAU facilities?
No, in facilities for handling substances hazardous to water, requirements from both building law and water law must be met. The existing usability certificates do not currently cover this.

Is there an approval for drinking water facilities?
The current usability certificates do not include drinking water approval.

Can swell tapes be used in structures with fluctuating groundwater levels?
Yes, Cresco® BT and Cresco® GR have also been used successfully in water exchange zones for years.

Which joints can be sealed with swelling tapes?
Cresco® expanding waterstops can be used to seal construction and concrete joints up to a crack width of wk = 0.25 mm.

What pressure was used to test the system?
The system was tested at 5.0 bar (50 m water column), according to AbP 2.0 bar (safety factor 2.5).

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What is the principle of function of the swelling tapes?
The swelling pressure builds up continuously during swelling. It seals the joint by compression.

Cresco® GR:
Swelling tapes based on hydrophilic synthetic rubber react with water in a delayed and well dosed swelling effect. In the process, water is embedded into the molecular structure of the flexible polymers, thereby increasing the volume of the swelling tape. Due to the serrated upper surface, the product has a particularly good bond with the concrete. The swelling effect is limited to prevent concrete spalling.

Cresco® BT:
Bentonite-based swelling tapes slowly build up swelling pressure when in contact with water. Joints, cracks or small shrink holes are filled by the swelling action of the bentonite. The swelling effect is limited to avoid concrete spalling.

When does the swelling effect of the tapes start?
Cresco® BT starts swelling immediately after water contact. Cresco® GR shows a significantly slower swelling in the first 3 days after temporary water contact and is therefore more suitable in case of expected rain.

What is the swelling capacity of swelling tapes?
Cresco® BT has a swelling capacity of up to 350% and Cresco® GR up to 300%.

Does the thinner Cresco® GR seal a joint in the same way as Cresco® BT?
In general, Cresco® GR seals just as well as Cresco® BT.

Are hazardous substances contained in Cresco® expanding tapes?
No, according to the REACH Regulation (1907/2006/EC), the components of the metal waterstop are not classified as hazardous and, according to the CLP Regulation (1272/2008/EC), they do not have to be labeled. Furthermore, no SVHC substances (Substances of Very High Concern) are contained.

On which substrates does the Cresco® mounting adhesive adhere?
The MS polymer-based adhesive adheres to concrete, steel and plastics. Further information on possible substrates and their pretreatment can be found in the technical data sheet.

What must be the minimum distance between the swelling tapes and the outer edge of the concrete cross-section?
A distance of at least 8 cm is recommended to avoid concrete spalling.

Why are swelling tapes more advantageous than other waterproofing products in special situations?
Swelling tapes can be installed more easily in complex building geometries. Furthermore, they are installed at the construction joint after concreting and hardening of the concrete.

Where in the wall cross-section are swelling tapes to be installed?
The swelling tapes should be located as centrally as possible in the wall (core area). The distance from Cresco® to the inside of the formwork or the double wall shell is at least 80 mm.

What chemicals are swelling tapes resistant to?
Our Cresco® expanding waterstops are generally resistant to many media. You will find a detailed list in the resistance table.

At what temperatures can Cresco® expanding waterstops be installed?

Cresco® BT:
Processing temperature: -10° to +50°C
Temperature resistance: -40° to 75 °C
Storage temperature: 5° to 25°C (dry and UV-protected)

Cresco® GR:
Processing temperature: -10° to +50°C
Temperature resistance: -40° to 75 °C
Storage temperature: 5° to 25°C (dry and UV-protected)

How long can swelling tapes be stored before installation?

Cresco® swelling tapes can be stored for up to 36 months.

Can "KG pipes" be sealed with Cresco® expanding waterstop tapes?

So-called sewer base pipes (usually made of PVC) with low wall thickness (< 4.5 mm) are critical. Cresco® BT is not suitable because the pipes can be dented. It is recommended to use Cresco® GR and stiffer PP pipes with a SN value > 10. Experience shows that such pipe deformations can be avoided under the forementioned preferences.

If you have any questions about installation, please also refer to the installation instructions at www.maxfrank.com.

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