BUILDING COMMON GROUND

MAX FRANK®

FAQ - Cresco® BT and GR

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 Approval

Which approvals are available for Intec® injection hoses?

- German approval with U-Marking

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 Waterproofing Guideline?

Yes, Cresco® swellable tapes meet the requirements of the Waterproofing Guideline regarding the usability of swellable tapes (10.1 Rules of Application). Suitability applies explicitly to all stress classes (ground moisture, water running freely down the wall, constant or intermittent water pressure) and all usage classes.

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 w_k = 0.25 mm.

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Max Frank GmbH & Co. KG | Mitterweg 1 | 94339 Leiblfing | Germany | info@maxfrank.com

What is the principle function of swelling tapes?

The swelling pressure builds up continuously during swelling. It seals the joint by compression.

Cresco® GR:
Plastic-based swelling tapes are highly reversible and store water in pore spaces. The tapes are dimensionally stable and cannot leach out.

The swelling rate also depends in part on the water present; salt water or water with a very high degree of hardness significantly reduces the swelling rate.

Cresco® GR remains stable even after repeated wet-dry cycles. The swelling pressure is less pronounced to prevent spalling on the component.

Cresco® BT:
Bentonite-based swelling tapes absorb water and thereby develop swelling pressure. Expansion occurs very quickly and is conditionally reversible.

Quality differences arise from the choice of bentonite and the rubber content in the swelling tape.

Cresco® BT contains a higher rubber content, which is why our swelling tape remains impermeable even after repeated wet-dry cycles and is also less susceptible to washout than conventional bentonite seals.

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 swelling tapes 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 80 mm 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 semi-precast 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.

Can "PVC 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.

Installation instructions and all other product documentation can be found at www.maxfrank.com.

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