KRYTONITE™ SWELLING WATERSTOP & KRYTONITE™ ADHESIVE

Frequently Asked Questions (FAQ)

Do I have to use Krytonite Adhesive or Can I use nails or fasteners?

The adhesive provides a continuous fixture for the Krytonite and forms part of the seal, so it should be used in all applications.

Nails and fasteners spaced 30 cm (12 inches) part have been successfully used as a secondary system to help secure Krytonite in some cases, but these should not be used as the only method to secure the Krytonite. Check that the nail/fastener size and spacing does not cause the Krytonite to split.

Can I use a different adhesive?

Krytonite Adhesive is the best adhesive to use for Krytonite. If necessary, a good quality, one component polyurethane construction adhesive is the next best option to Krytonite adhesive. Please note that Kryton cannot guarantee the performance or compatibility of any other adhesive.

The adhesive will develop a skin and provide the wet adhesion needed to place Krytonite within a few minutes. At 20°C the adhesive will set in 3-4 hours. Fully set adhesive will help the Krytonite stay in place if it is exposed to light rain. Recently placed Krytonite will be more sensitive to early rain and bond failure if the adhesive has not fully set.

Can we use Krytonite Adhesive on a damp or wet surface?

Krytonite Adhesive will bond to damp or wet surfaces provided it is clear of debris and there is no pooling of water on the concrete surface. Excessive pooling of water in the area will increase the chances of premature expansion of installed Krytonite leading to bond failure. Krytonite should always be protected from early water exposure.

How quickly does Krytonite expand? If it gets a TINY bit wet, do I need to replace it? Will it expand before the concrete hardens?

Krytonite goes through a slow controlled expansion, it will not expand into the freshly placed concrete. If it gets slightly wet before the next concrete pour you may see a “softening” of the edges, but in most cases you can still pour concrete as planned. You should always protect Krytonite from early water exposure, but it can tolerate some early water exposure.

The installed Krytonite got wet and started to expand. Do I need to replace it?

If the Krytonite has expanded only slightly (up to 25%) and remains fully adhered to the adhesive, then concrete may still be placed as normal. Greater expansion, or any loss of bond with the adhesive due to early expansion will require the Krytonite to be replaced.

Can I use Krytonite to seal joints other than construction joints?

Krytonite can be used to seal the around items fully embedded in concrete such as pipes, studs or tie rod sleeves. For small items, it may be necessary to wrap rebar tie wire around the Krytonite to secure it in addition to the adhesive.

Can the swelling of Krytonite cause damage to concrete structures?

If Krytonite is installed correctly, according to Kryton’s Application Instruction 4.15, it will not cause damage to concrete structures. A minimum of 75mm (3 in.) of concrete cover is required to ensure any immediate swelling will not damage the concrete.

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Can Krytonite prevent corrosion of rebar at the construction joint?
Krytonite installed alone will not prevent corrosion on the outboard reinforcing steel. To increase the long-term durability of the joint, Kryton's Krystol Waterstop Treatment (KWT) should be applied on the concrete surface before adhering Krytonite to KWT.

Is Krytonite like bentonite? What is Krytonite made of?
Krytonite is made from advanced hydrophilic polymers, which is a superior technology to swell strips such as bentonite, providing superior sealing, stability, and longevity. The installation of Krytonite will be very familiar to anyone who has installed bentonite or other swelling waterbars. Krytonite has the same limitations as far as needing dry installation conditions and minimum concrete cover.

Can Krytonite be used when water is contaminated with salts, acid, or hydrocarbons (i.e. gasoline, diesel, motor oil)?
Yes, through its unique synthetic rubber technology, Krytonite is able to swell in waters contaminated with salts, acids, or hydrocarbons. Due to its cohesive properties it will not deteriorate in the presence of contaminates and Krytonite itself does not release any volatile compounds. It is, however, recommended to confirm with Kryton's technical department if contaminate levels are high.

How much does Krytonite swell? How long does it stay swelled?
The maximum swelling potential of Krytonite is dependent on the source of water it is exposed to. For instance, in clean water it can expand up to 1000% of its original size when unconstrained. In the joint, however, Krytonite will expand until it develops adequate pressure to stop the flow of water which may only be a small amount. Krytonite will stay swelled as long as there is water present in the joint to cause the expansion.

Is the integrity of Krytonite lost from expansion/shrinkage cycles in joints?
No, Krytonite is composed of advanced hydrophilic polymers, delivering superior sealing, stability, and longevity. It will not deteriorate over time, providing continued performance properties in the joint and protecting the structure for its service life.

I put some Krytonite in water to watch it expand and it went soft and mushy and then fell apart. Is something wrong? / I put some Krytonite through several wet/dry cycles and it eventually got very brittle and broke up easily when dry. Is something wrong?
This is a limitation of the test environment and in no way presents a problem with the Krytonite. Testing that allows Krytonite to expand unconfined is not representative of the environment it actually performs in. In reality, Krytonite only expands a tiny amount (if at all) until it develops the pressure needed to seal a joint. Uncontrolled expansion, especially in tap water (which is relatively clean and is a much stronger solvent than groundwater or "concrete water") can weaken and stress the product in ways that just cannot happen inside a concrete joint. At maximum expansion, Krytonite can break down and leach its plasticizing agents that would otherwise remain stable in its intended service environment. This can be expected for any product that swells in water including competitive waterbars. You could relate this to how Krystol seems weak growing on the surface of concrete, but is actually very strong in its intended environment inside the concrete, where it can hold back extreme water pressure.

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