



Structural waterproofing using Bentonite Membranes

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If you've not used a 'bentonite carpet' for structural waterproofing before, you may be missing out! Used in conjunction with well compacted concrete, a bentonite membrane (also known as a bentonite carpet) can provide a robust waterproofing protection system which is straight forward to install, self-repairing, and easy to repair, or patch, prior to pouring concrete. Bentonite membranes have been a solid benchmark of external waterproofing solutions (designated as Type A within BS 8102: 2009) for many years and are therefore tried and tested in many environments. They are low-cost options and are accepted by NHBC and other leading insurers as an acceptable line of waterproofing defence.

The term *Bentonite* was first used for clay that was discovered in the 19th Century near Fort Benton, Montana, USA, although it is also found all over the world. Dried bentonite clay was found to have incredible swelling capabilities when it came into contact with water and, when incorporated into a woven sheet membrane product (usually using bentonite in its powdered, dry state), the built-in swelling capabilities could be harnessed to produce a swellable, active waterproof membrane.

Properly poured and compacted quality concrete *can* provide a water barrier by itself but, it's not the properly installed concrete that needs the attention, it's actually the cracks, fissures and under-compacted areas (along with construction joints) that allow water into an area where it isn't welcome. Mostly, where a dry environment is needed, especially when it is to become a habitable space, concrete alone is unlikely to provide a complete and intact waterproof structure. Therefore, the use of a robust, external membrane applied *before* concrete is poured is a significant step towards achieving this.

Bentonite membranes are simple to install, and quite forgiving, and can be installed in most temperatures and weather conditions. If damaged during installation, for example by steel reinforcement piercing the membrane during steel installation, they can easily be patched and repaired using the same material that will already be on site. Punctures in bentonite membrane will often self-heal or can be enhanced by adding some bentonite powder (available as an accessory) with a little water added to form a repair paste. The paste is a very versatile and simple solution to all those 'woops moments'!

At Triton Systems we provide quality and cost-effective Bentonite structural waterproofing solutions (and accessories) with long product warranties, and which comply with relevant BS standards. Your own team will be able to install them following our installation guidance, ultimately keeping costs down. [Find out more about Triton Bentonite systems here.](#)

Triton Systems has been established since 1977. We are structural waterproofing experts, and we understand concrete.

Please contact us for further information and advice:

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