

# Accelerate construction with innovative waterproofing technology

**These days, the construction industry is strongly focused on sustainability and for good reason. Sustainable structural waterproofing can mean significant savings for builders and owners right from the start of application. But that is not all, as proper waterproofing of a building continues to protect against costly moisture damage for decades to come.**

Using innovative waterproofing technologies can ensure that the construction project is sustainable and effective. Proper waterproofing not only helps save money, but also reduces environmental impact. Preventing moisture and mould growth, it also contributes to a healthier and more comfortable indoor climate.

It is important that you consider waterproofing as a crucial aspect when planning a building project. Careful selection of the right waterproofing materials and methods can guarantee long-term savings and avoidance of costly damage. Sustainable waterproofing can also improve the environmental balance and contribute to climate protection.

In general, we can say that sustainable structural waterproofing is an important factor for the construction of the future. It can not only save costs, but also protect the environment and improve the quality of life.

Developing innovative and effective concrete waterproofing technologies requires a high level of experience and knowledge in various application areas. Especially for the waterproofing of new buildings, the used product ought to be proven in building practice and should have demonstrated its strengths not only in research but also in practical application. The development of new waterproofing technologies requires intensive research and testing to ensure that they can meet the requirements of various construction projects. So far, the BT specialists have found the right solution for every problem.

New buildings place special demands on waterproofing technology, as they often have to meet the latest standards and requirements. Using products that have been proven in practice and tested according to the latest standards guarantees high sealing performance and durability.



*RubberElast® at the flood protection wall in Wittenberge*

It is important to emphasise that the development of concrete waterproofing technologies is a continuous process that requires constant development and innovation. This is the only way to find new and more effective solutions to meet the increasing demands for sustainability and efficiency.

## **Elast sealing solutions: Innovative technology for effective moisture control**

B.T. innovation GmbH has solutions for professional waterproofing of residential buildings with a variety of well-established products for interior and exterior use. It is well known that requirements can vary depending on the area of use.

For exterior applications, it is particularly important that the waterproofing is resistant to water ingress and water pressure - a challenge that BT can meet with its innovative solutions. But the choice of the right product also plays a decisive role indoors: Environmental compatibility and low emissions are decisive factors here, which BT considers in its developments.

Whether planning a new build or refurbishment project, B.T. innovation promises to provide a suitable solution for all waterproofing needs and is a reliable partner for sustainable and permanently watertight homes.

**Reliable protection against moisture and weathering:  
The challenges of waterproofing outdoors**

**Reliable sealing in case of rising groundwater levels**

If a cellar starts leaking, this can have various causes. A common cause is a rising water table, especially in the case of inadequately sealed floors or walls. Flooding or rainwater penetration can also lead to water ingress. As a rule, leaks occur in areas that have been insufficiently sealed or only sealed against low water pressures. The problem often only becomes apparent with larger amounts of water and the resulting water load. Soil moisture and seeping water are also common challenges. Special sealing is required to withstand all these loads reliably in the long term. This is the only way to ensure effective protection against moisture and water damage.

**Reliable sealing in the roof area and around windows and doors**

Waterproofing in roof and exterior areas as well as window and door seals must, besides their function as moisture and water protection, also have a high UV and weather resistance to prevent premature failure of the waterproofing. The waterproofing must be able to withstand constant temperature fluctuations and weather conditions such as freeze-thaw cycles and wind. Especially with façade joints, the decorative aspect also plays an important role.



Roof waterproofing with the ProElast® system

**B.T. innovation GmbH**

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### Avoid moisture damage: The challenges of indoor waterproofing

The requirements for sealing products indoors differ from those outdoors. Wear-resistant floor coatings and sealants for kitchens and bathrooms, especially for wet rooms, enjoy particular demand here. Another demanding challenge is the simultaneous sealing and tiling of walls and the secure sealing of media feeds such as power lines, drinking water and drain pipes. As the products are processed in living and working areas, they must be environmentally friendly to keep the interiors free of harmful emissions. Sufficient resistance to household chemicals and cleaning agents is another significant point.

### Sustainable waterproofing solutions: Durable, environmentally friendly and chemical resistant

#### Overview of Elast sealing systems

With the innovative sealing systems from B.T. innovation GmbH, the previously mentioned tasks can be tackled easily and reliably. With the SynkoElast® sealing tape, the concreting and sealing process merge into one operation. The sealing tape is laid directly from the roll halfway into the freshly poured concrete or laid on solid concrete with primer. Then, the concreting can continue. Consequently, execution in accordance with the waterproof concrete guideline is very simple and the sealing of the construction joints created in the site-cast concrete is simplified, even if the reinforcement is complex.

The advantages are:

- Easy to lay in the fresh concrete or on solid concrete
- More cost-effective than conventional waterproofing

- Tested safety up to 2 bar water pressure (20 m water column)
- The fresh concrete bonds with the sealing during curing

For prefabricated building components, BT recommends the proven RubberElast® and MultiElast sealing systems. With both systems, the joints are sealed by the compression of the joint tapes between the components. In the case of horizontal joints, this usually results from the load of the component above and for vertical joints, for example, with the BT turn-buckle® or other installation techniques. Immediately after installation, joints sealed with RubberElast are watertight up to 5 m, with MultiElast up to 10 m.

The complete exterior basement surface, the walls and the wet rooms in the house can be reliably sealed with the product FlächenElast® type S or V. The laminar waterproofing system, which forms a water-impermeable membrane when spread or poured, can be used simply and easily wherever a structure is to be waterproofed against pressing water. Even cracks of up to 5 mm can be sealed with FlächenElast type S or V. The simultaneous sealing and tiling of walls, for example in wet rooms, is equally possible as repairs in the roof area.

The advantages are:

- FlächenElast type S or V is very easy to work with (paint or grout).
- Environmentally friendly, as free of bitumen and solvents
- Permanent sealing (FlächenElast type S or V is crack-bridging up to 5 mm)
- Tested sealing up to 1.0 bar water pressure (10 m water pressure)
- versatile use (grouting, painting)



Balcony water-  
proofing with  
FlächenElast®  
system

InnoElast® products are permanently elastic UV- and weather-resistant adhesives and sealants. They can be used to seal structural joints on façades, connections on windows, doors, penetrations and joints in basements, roofs and bathrooms/sanitary facilities in the simplest possible way. With very low shrinkage, concrete, steel, aluminium, tiles, clinker, marble, wood, PVC, even glass and acrylic glass can be bonded.

The advantages are:

- Durable sealing, as practically non-shrinking
- Very environmentally friendly
- Easy processing (1-component)
- Can usually be used without primer (only one working step)
- Can also be applied to damp substrates

With the ProElast® system, joints in house and flat construction can be subsequently sealed from the outside. For basements and roofs, typical applications are the large-scale sealing of construction joints, predetermined crack cross-sections and movement joints. The ProElast system consists of an EPDM foil in strip form and the InnoElast adhesives and sealants.

The advantages are:

- Safety up to 2 bar water pressure (20 m water column)
- Very environmentally friendly, as bitumen-free

- Easy processing (2-component)
- Durability

An experienced advisory team is always on hand to help customers solve their individual waterproofing problems. B.T. innovation provide well established waterproofing solutions and tailored advice to ensure the waterproofing projects can be successfully implemented with the best possible solution. ■

FURTHER INFORMATION



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