Technical data sheet – MultiElast

Product description

MultiElast is a multipurpose waterproofing for construction joints and precast elements. The MultiElast can be installed directly into the fresh in situ concrete and thus seals construction joints. As self-adhesive compression sealing tape it is simply affixed onto the joint flank of the first component / precast elements. During the assembly of the next component, the sealing tape is compressed in the joint, thus sealing the resulting joint up to a water column of 10 m.

Product features

::: Very easy to process
::: Installation without further aids or tools
::: As compression sealing tape waterproof immediately after assembly
::: Flexible even at low temperatures
::: Weather resistant
::: Tested to be water tight up to a water column of 10 m
::: Resistant to acid, alkali and salt
::: Bitumen free
::: Can be combined with other Elast products

Areas of application

::: For sealing joints between precast concrete elements
::: For sealing of joints between all kinds of precast elements
::: Sealing of construction joints within in-situ concrete
::: For sealing joints between precast concrete elements with subsequent concreting

Product data & delivery form

5002067 MultiElast 30 mm x 20 mm

Storage

Unlimited storable in a cool and dry environment

Packaging

Size (width x height in mm x mm)
30 x 20 4.0 m/roll 4 rolls/carton
45 cartons / pallet

Processing

Application 1: Construction joint sealant inserted in fresh concrete according to test certificate (ABP)

::: Substrate preparation (in situ concrete)

When installing in fresh in-situ concrete, no substrate preparation is required. It should just be ensured that the MultiElast is installed in the concrete directly after it has been brought in. For this purpose, the concrete in the area of the tape should be pulled off smoothly, not rubbed smoothly.

::: Processing (in situ concrete)

MultiElast is pressed halfway into the fresh concrete directly from the roll with the protective foil facing upwards. Make sure that the sealing tape in the lower area is completely enclosed by the fresh in situ concrete and that approximately half of it protrudes out of the concrete. During cement hydration, MultiElast and the fresh concrete form a permanent and flexible sealant.
To extend the tape, the ends of the MultiElast rolls have to be connected to each other with an overlap of 5 cm at the sides. The lateral overlapping of the band ends must be done without air inclusions by firmly squeezing / kneading the bands together.
Once the concrete has hardened, the protective foil is removed shortly before the 2nd concreting step starts and in-situ concrete can be filled in. After removing the sealing strip, make sure that the joint sealing tape is not contaminated with dirt until the concreting of the next concreting section.
Mistakes in tape installation can be corrected after hardening of the concrete.

::: Notes (in situ concrete)

For forming and installing curves with the elastic MultiElast tape, it may be helpful to bend the strip shortly after unrolling It with much greater curvature and then to insert it into the fresh concrete.
Especially at low temperatures, the tape ends can be safely connected by briefly heating the tape ends.

Application 2: Joint sealant when installing on set concrete

::: Substrate preparation (set concrete)

In the area of the joint, the concrete substrate must be firm and load bearing, as well as free of dust, grease, oils and other separating materials to ensure proper adhesion of the MultiElast sealing tape. The substrate must be dry during assembly. A loose cementitious sintered layer on the concrete surface must also be removed before the MultiElast installation, for example by grinding.
A suitable primer is applied onto the substrate area at the later position of the sealing strip with a brush. The pretreated surface must then be ventilated and dry.

::: Processing (set concrete)

After the solvent has evaporated, the sealant tape can be installed on the pretreated surface. For this, the primed surface must be heated so high e.g. by using a gas burner that the MultiElast superficially melts during installation. In addition, the MultiElast strip is pressed firmly at each point onto the pre-treated concrete.
To extend the tape, the ends of the MultiElast rolls have to be connected to each other with an overlap of 5 cm at the sides. The lateral overlapping of the band ends must be done without air inclusions by firmly squeezing / kneading the bands together.
The protective foil should be removed from the sealing strip shortly before the next concreting step starts and in-situ concrete is filled in. After removing the sealing strip, it must be ensured that no contamination of the joint sealing tape occurs up to the concreting of the next section.

::: Notes (set concrete)

Tape extensions can be formed securely at low temperatures by briefly heating the tape ends.
Before concreting (after cooling MultiElast and concrete), it is recommended to check the secure adhesion of the sealing tape to the concrete. A well-adhering MultiElast strip can only be removed with greater force. If the strips are easy to remove, they must be re-bonded with heat to the substrate.

Application 3: Joint sealant - Repair of installed tapes

MultiElast strips, which can easily be removed from the pretreated / primed concrete after cooling, must be re-bonded with heat.
If the MultiElast strip has been installed / pressed partially too deep into the fresh, In situ concrete, then you can stick a strip of MultiElast on top of the installed strip after concrete setting. To do this, you must heat both strips until the strips melt superficially and press them together hot.

Application 4: Sealing of joints between precast element according to test certificate (AbP)

::: Substrate preparation (joints between precast concrete element)

In the area of the joint, the concrete substrate must be dry, clean, firm and load bearing, as well as free of dust, grease, oils and other separating materials, in order to ensure optimum adhesion of the MultiElast. In case of doubt we recommend a preliminary test.

::: Processing (joints between precast concrete element)

MultiElast is placed directly from the roll, with the protective layer facing upwards, in the middle of the precast element area that should be connected to the next element. The MultiElast tape is pressed firmly along its entire length to prevent the seal from shifting when the next precast element is placed. In corners, the sealing tape is bent before pressing into the required shape. To elongate the MultiElast strip, cut the ends at an angle (30 ° to 45 °) so that they are connected together after being pressed together without significantly increasing the cross-sectional area. Before placing the next component, remove the protective strip and check that the sealing strip is firmly and non-slid ably mounted in the desired position. Immediately thereafter, the next finished part is pressed in the joint area against the sealing tape, so that it can stick to it.
For optimum sealing effect, it must be ensured that the material is compressed to ≤ 20% of its original height before the joint is stressed.
The joint can be checked for tightness immediately after installation and exposed to pressing water.

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:::Notes (joints between precast concrete element)

The joint width / MultiElast height after compression by 80% for the optimum sealing performance up to 10 m water depth is 4.0 mm.
Especially for horizontal joints, note that the MultiElast tape is a sealing tape. It cannot be used for load transfer, this is possibly to be ensured by other suitable measures. To avoid damaging the sealing strip, the joint width must not be below 2 mm at any point or at any time.

Notes (General)

When using MultiElast to seal components made of impermeable concrete in accordance with the German "WU guideline", the General Building Inspectorate Test Certificate must also be observed.
At low temperatures, assembly can be eased by storing the MultiElast rolls as warm as possible (room temperature) until just before installation. To further ease the assembly the substrate can additionally be heated in the joint area when MultiElast is installed on precast elements.
When installing in fresh concrete at low temperatures, tape end connections can be safely formed by briefly heating the ends of the strip.
For other applications, we recommend a preliminary test in case of doubt and ask for clarification with clarification with our application technology.

Technical properties

Color	black
Consistency	elastoplastic
Main component	rubber compound
Processing form	Self-adhesive on rolls with protective foil
spec. density	Ca. 1.3 g/cm³
Compressive strength	Ca. 1.75 N/mm² (in case of fast compression by 80%)
Adhesive tensile strength	> 40kPa (on concrete)
Temperature resistance	-40°C to +60°C
Processing temperature	-5°C to +40°C (component and material temperature)
Chemical resistance	H_2SO_4 (pH 4,5) - acid, liquid aggressive to concrete $Ca(OH)_2$ (pH 12) - alkali NaCl - salt

The information in this data sheet has been provided with care based on our experience and the respective known state of science and technology, but is not binding. They must be adapted to the respective building object, intended use and the particular local loads. Given this, we ask for understanding that we limit our liability for the information provided in this data sheet and do not assume any liability in case of intent, gross negligence or breach of the instructions. In any case, the accepted rules of technology must be complied with.

Issue 09/19 – This data sheet has been technically revised. Previous issues are not valid, if a new issue has been technically revised, this issue loses its validity. Please make sure that you are in possession of the latest issue.