

# CEMdicht 3 in 1

A Unique Multi Purpose Waterproofing Product



## Product Characteristics

CEMdicht 3 in 1 is a world novelty of BPA GmbH. **3 in 1** means one powder – 3 different end products as well as implementations:

1. Powder + water = “stiff” mineral sealant silt
2. Powder + CEMdicht flex = “flexible” sealant slurry
3. Powder + CEMdicht flex<sup>+</sup> = “flexible + crystalline” sealant slurry

CEMdicht is a grey dry cement mortar and can be applied by brushing, trowelling or spraying.

By adding the liquid component CEMdicht flex the mineral sealant silt will become so flexible that it can be applied to highly stressed, crackprone undergrounds (c.f. Technical leaflet “CEMdicht flex”). The liquid component CEMdicht flex<sup>+</sup> has crystalline characteristics in addition.

CEMdicht holds the General Building Code Test Certificate (abP). It is constantly controlled as required in the German Bauregelliste.

## Uses

CEMdicht is used to protect buildings and parts thereof against ground dampness, pressing water and non-pressing water. It is applied:

- at vertical waterproofing of earth touching constructions
- for exterior waterproofing of walls (even afterwards)
- for waterproofing of concrete slabs and foundations
- for vertical waterproofing of splash water areas at wall bases
- for waterproofing at the cross-section of walls and concrete slabs
- for waterproofing against interior water pressure (water tanks)
- Interior waterproofing against exterior water pressure flow (even afterwards)
- waterproofing against temporarily pressing water from the inside during construction work.

CEMdicht is applied on:

- reinforced concrete as per DIN 1045,
- solidly filled masonry brick work as per DIN 1053
- cement plaster as per DIN 18550.

CEMdicht is suitable as waterproofing coating for underground screeds, plasters of the mortar groups PI, PII, and PIII as well as for tiles and slabs.

## Application of 1 Component – not flexible

The underground should be firm, load carrying and free from separating substances. Concrete undergrounds have to be free of gravel nests, cracks, and other unevenness. The concrete neither must not contain additives nor be treated with products that harm the sealant silt. Unevenness and cracks have to be equalized with a PIII cement mortar before waterproofing.

Brickwork with joints has to be plastered with a plaster of PIII mortar group (minimum layer thickness 10 mm).

Onto solidly filled brickwork as per DIN 1053 CEMdicht can be directly applied.

Do not work at temperatures below +5 °C or when frost or rain is expected. Do not apply onto frozen underground. If necessary wet the underground before application.

**Mixing:** Mix CEMdicht with clean water until obtaining a lump free paste. Water amount needed: approx. 8.5 l/bag for a brushable consistency. About 7.5 l/bag for a trowelling consistency. To improve the workability a bonding emulsion can be added (approx. 1 l/bag) to the mixing water. CEMdicht can be applied with suitable sprayguns.

Apply minimum 2 layers of the mineral sealant silt (against ground dampness and with non-pressure water flow) or minimum 3 layers (against pressure water flow or horizontal waterproofing). Each layer must have the same material consistency following the tool with which the material is applied: brush, trowel or suitable spray gun. Waiting time between two layers has to be at least so long that the previous layer will not be damaged when applying the next one. Keep the minimum thickness on all edges and corners. Minimum thickness of the dry layer against ground dampness and with non-pressure water flow is 2 mm, in all other cases 3 mm. Maximum thickness of dry layer is 5 mm.

**Amount required:** Approx. 4 kg/m<sup>2</sup> against ground dampness and non-pressure water flow (= about 2 mm layer thickness). Approx. 7 kg/m<sup>2</sup> against pressure water flow (= about 4 mm layer thickness). The amounts given refer to the dry mortar.



CEMdicht 3 in 1

Working time will shorten with high outdoor temperatures, just as it will lengthen with low outdoor temperatures. Prepared mineral sealant slurry should be used within two hours. Fresh material can be rinsed off with clean water.

**Aftertreatment:** Fresh waterproofing is to be protected for about three days against too much sun, wind and heat. If necessary, keep moist. Allow ten days minimum for the mineral sealant slurry to be load carrying and fully functional. Damage at the new waterproofing can be repaired with CEMdicht. Protect sealant slurry coated surfaces by suitable protection coats. The foundation pit is to be filled in accordance to the standard building regulations.

### Application of 2 Component – flexible and 2 Component – flexible + crystallizing additives

The substrate must be firm, load carrying and free from separating substances. Concrete has to be free of gravel nests, cracks, and other unevenness. The concrete neither must not contain additives nor be treated with products that harm the sealant slurry.

Gravel nests have to be equalized with a cement mortar before waterproofing. Edges have to be broken, grooves have to be rounded. Brickwork with joints has to be plastered with a cement-plaster (minimum layer thickness 10 mm). Onto solidly filled brickwork CEMdicht “flex” can be directly applied. Do not work at temperatures below +5 °C or when frost or rain is expected. Do not apply onto frozen substrate. Substrate has to be thoroughly wet before application.

**Mixing:** Mix thoroughly one 30 kg bag CEMdicht with one 10 litre can liquid component CEMdicht „flex“ (slowly running drill with rotating mixer). If necessary add a small amount of water to obtain the working consistency.

Apply minimum 2 void-free layers of the flexible sealant slurry (against ground dampness and with non-pressure water flow) or minimum void-free 3 layers (against pressure water flow or horizontal waterproofing). Each layer must have the same material consistency following the tool with which the material is applied: brush, trowel or suitable spray guns. Waiting time between two layers has to be at least so long that the previous layer will not be damaged when applying the next one. Keep the minimum and maximum thickness on all edges and corners. Minimum thickness of the dry layer against ground dampness and with non-pressure water flow is 2 mm, in all other cases 2.5 mm. Maximum thickness of dry layer is 5 mm.



### 2 component flex and 2 component flex+



**Amount required:** Approx. 3 kg/m<sup>2</sup> against ground dampness and non-pressure water flow. Approx. 4 kg/m<sup>2</sup> against pressure water flow. The amounts given refer to the dry mortar.

Prepared flexible sealant slurry should be used within 30 minutes. Fresh material can be rinsed off tools with clean water.

**Aftertreatment:** Fresh waterproofing is to be protected for about three days against too much sun, wind and heat. If necessary, keep moist. Allow ten days minimum for the flexible sealant slurry to be load carrying and fully functional. Damage at new waterproofing can be repaired with CEMdicht “flex”. Protect flexible sealant slurry coated surfaces by suitable protection coats. The foundation pit is to be filled in accordance to the standard building regulations.

### Form of Delivery / Storage

Ready-to-use, available in 30 kg bags. CEMdicht “flex” and “flex+” are available in 10 litre cans.

Storage: Keep material in dry place. Each can be stored for approx. 6 months.



### Safety Precautions

The powder component is caustic, the liquid component is irritant, so direct contact to eyes and skin is to be avoided. Flush eyes with plenty of flowing water. May cause serious eye damage. Seek medical advice if necessary. Do not inhale dust. Wear suitable protective clothing and gloves. Keep out of reach for children.

### Disposal

Packing needs to be fully emptied and can then be recycled. We recommend to cure the material/liquids and dispose powder as construction waste. Disposal according to local regulations.