BPA WATERPROOFING SYSTEMS

CEMDICHT 3 IN 1 MINERAL SEALANT SLURRY

PRODUCT DESCRIPTION

CEMdicht 3 in 1 is a grey colored, mineral-based waterproof powder, specifically formulated so that the mixing liquids used produce a product that is suitable for various waterproofing applications. It can be applied by brush, trowel or with suitable spraying equipment.

In combination with the liquid component CEMdicht flex the mineral sealant silt becomes so flexible that it can be applied to highly stressed, crack-prone surfaces. The liquid component CEMdicht flex+ additionally has crystalline characteristics.

APPLICATION AREAS

CEMdicht 3 in 1 is used to protect buildings against ground dampness, pressurized and non-pressurized water.
It may be applied on reinforced concrete as per DIN 1045, solidly filled masonry brick work as per DIN 1053 and cement render as per DIN 18550.
CEMdicht 3 in 1 is suitable as waterproofing coating for underground screeds, renders of the mortar groups PI, PII, and PIII.

CEMdicht 3 in 1 is used in combination with the following products systems:

- Sealtape CEMdicht 2000
- Dual Proof mechanical bonding system
- Swelling Non-woven EasySeal
- Swelling non-woven SilverSeal, with PE-sheet

Further application areas:

- Vertical waterproofing of backfilled retaining walls
- Waterproofing of concrete slabs and foundations
- Waterproofing at the cross-section of walls and concrete slabs
- Suitable for use against positive water pressure
- Suitable for use against negative water pressure

HOW DOES MINERAL SEALANT SLURRY CEMDICHT 3 IN 1 WORK?

1. Dry mortar + potable water: produces an active mineralizing, stiff waterproof slurry, used as internal coating against negative water pressure.

2. Dry mortar + CEMdicht flex: produces an active, mineralizing, flexible waterproof slurry, used as external, crack-bridging sealant against positive water pressure.

3. Dry mortar + CEMdicht flex + Crystalline: produces an active, mineralizing and crystallizing, flexible waterproof slurry, used as external, crack-bridging sealant in positive water pressure.

CHARACTERISTICS AND ADVANTAGES

WATERPROOF CONSTRUCTION

- By adding various liquid components to the powder 3 different forms of applications can be covered.
- May be brush, trowel or sprayed applied
- Can be used as internal and external waterproof coating.
- Can be used in pressurized and non-pressurized water
- Can be applied to highly stressed, crack-prone surfaces
- Active mineralizing and crystallizing sealant

PRODUCT DATA

	Mineral Sealant Slurry CEMdicht 3 in 1	Article-No.
Dimensions/ Packaging	Dry mortar CEMdicht 3 in 1: Bag with 30 kg, 42 bags per pallet	23-101
	CEMdicht flex: Canister of 10 liters, 42 canisters per pallet	23-102
	CEMdicht flex+: Canister of 10 Liter, 42 canisters per pallet	23-103
	Special container: CEMdicht 3 in 1 flex "Combi " 20 kg as special container in bucket with 15 kg dry mortar and 5-liter canister flex or flex+	23-100
Storage	Shelf live approx. 6 months when stored clean, dry, frost-free and shaded from direct sunlight.	

APPROVALS

CEMdicht 3 in 1 has a General Building Code Test Certificate (abP)

TECHNICAL DATA

CEMdicht 3 in 1 1K stiff

Property	Test Method	Unit	Characteristic Value
Mixed Mineral Sealing Silt			
Consistency (Slump)	DIN EN 1015-3	cm	21
Raw density of fresh mortar	DIN EN 1015-6	kg/dm³	1,90
Air content of fresh mortar	DIN EN 1015-7	Vol.-%	6,7
Hardened Mineral Sealing Silt			
Flexural strenght	DIN EN 196-1	N/mm²	5,4
Pressure Strenght	DIN EN 196-1	N/mm²	21

CEMdicht 3 in 1 2K „flex" / CEMdicht 3 in 1 2K „flex+"

Property	Test Method	Unit	Characteristic Value
Source Materials			
Solids Content (CEMdicht flex)	DIN EN ISO 3251	M.-%	55
Mixed Mineral Sealing Slurry			
Consistency (Slump)	DIN EN 1015-3	cm	26,5
Raw density of fresh mortar	DIN EN 1015-6	kg/dm³	1,93
Air content of fresh mortar	DIN EN 1015-7	Vol.-%	4,0
Hardened Mineral Sealing Slurry			
Tensile strenght (dry/wet)	DIN EN 527-2	N/mm²	0,7/0,6
Tensile strain (dry/wet)	DIN EN 527-2	%	17/13

ADDITIONAL INFORMATION

Minimum values when carrying out a sealing with CEMdicht 3 in 1 1K „stiff“, 2K „flex“ and 2K „flex+“

Application Area/Load Case	Unit	Layer Thickness		Maximum Value
		wet	dry	
Sealing of foundation slabs contacting the ground and outer wall surfaces against soil-borne moisture and non-retained infiltrating water as well as sealing of building foundations in the region of splash water.	mm	≥ 3,3	≥ 3,0	5
Horizontal sealing in and below walls against capillary rising moisture.	mm	≥ 4,4	≥ 4,0	5
Sealing of outer walls contacting the ground against retained infiltration water and pressing water of up to 3m of water at a maximum foundation depth of 5 m.	mm	≥ 4,4	≥ 4,0	5
Sealing of outer walls in contact with the ground against retained infiltration water and pressing water up to 3 m of water at a maximum of 5 m foundation depth including the transition area to the foundation slabs made of concrete with a high-water penetration resistance (WU concrete).	mm	≥ 4,4	≥ 4,0	5
Sealing of vessels against water pressing from the inside in the internal and external regions up to a filling level of 6 m.	mm	≥ 4,4	≥ 4,0	5

Application of CEMdicht 3 in 1

Surface:
The substrate 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 should not contain additives or be treated with products that could potentially harm the waterproofing slurry. Unevenness and cracks should be repaired using a PIII cement mortar. Brickwork with joints must be rendered with a PIII mortar render (minimum layer thickness 10 mm). Onto solidly filled brickwork as per DIN 1053 CEMdicht 3 in 1 can be applied directly.

Preparation:
Mix CEMdicht 3 in 1 with clean potable water until obtaining a lump free paste. Water requirement is approximately 8.5 l/bag for a brushable consistency and approximately 7.5 l/bag for a troweling consistency. To improve the workability a bonding emulsion may be added (approx. 1 l/bag) to the mixing water.

Application:
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). Waiting time between layers must be at least so long that the previous layer will not be damaged when applying the next one. Apply subsequent layers in opposite direction to the first layer, ensure the minimum application thickness is maintained on all edges and at 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.

Application of CEMdicht 3 in 1 “flex“ and “flex+“

Surface:
The substrate must be firm, load carrying and free from separating substances. The concrete must be free from gravel nests, cracks, and other unevenness. The concrete should not contain additives or be treated with products that could potentially harm the waterproofing slurry. Gravel nests have to be equalized with a cement mortar before waterproofing. Brickwork with joints must be rendered with a cement-render (minimum layer thickness 10 mm). Onto solidly filled brickwork CEMdicht “flex” and “flex+” can be applied directly. Do not apply at temperatures < +5 °C or when frost or rain is expected.
Do not apply onto frozen substrate. Substrate should be thoroughly wet but should be free from standing water before application of the waterproof slurry.

Coverage
Approximately 3 kg/m² against ground dampness and non-pressure water flow. Approx. 4 kg/m² against pressure water flow. The amounts given refer to the dry mortar. Mixed flexible waterproof slurry should be used within 30 minutes.

Application
Mix thoroughly one 30 kg bag CEMdicht 3 in 1 with one 10 liter can liquid component CEMdicht “flex” and “flex+” using a slow speed drill with rotating mixer. If necessary add a small amount of water to obtain the working consistency.

Apply a minimum 2 void-free layers of the flexible waterproofing slurry against ground dampness and with non-pressure water flow or minimum void-free 3 layers against pressure water flow or horizontal waterproofing. Waiting time between layers must be at least so long that the previous layer will not be damaged when applying the next one.
Apply subsequent layers in opposite direction to the first layer, ensure the minimum thickness is maintained on all edges and at 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. Fresh waterproofing should be protected for three days against sun, wind and heat. If necessary, keep moist with clean potable water. Allow ten days minimum for the flexible waterproofing slurry to be load carrying and fully functional. Damages may be repaired with CEMdicht “flex” and “flex+”. Protect flexible sealant slurry coated surfaces by suitable protection coats. Clean equipment with fresh water.

General Advice

Application temperature >5°C. Do not apply on frozen surfaces or when rain or frost are to be expected within the next 24 hours. The above-mentioned temperatures constitute the generally valid area in which no additional measures need to be taken during application.

Environment and health

This product does not represent a hazardous substance within the meaning of the EU Hazardous Substances Regulation. A safety data sheet for transport, placing on the market and use is available on the request.

Health and Safety

The essential safety, toxicological, physical and ecological data for the handling of CEMdicht 3 in 1 can be taken from the product-specific safety data sheets.

Data

All technical data stated in this product data sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Legal advice

All above mentioned Information concerning BPA products, especially any recommendations and advices relating to the application and use of BPA products are given in good faith based on BPA´s current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with BPA's recommendations.

In practice, the differences in materials, actual site conditions and other factors outside are such that no warranty nor any liability arising out of any legal relationship whatever, can be inferred either from this information, or from any written recommendations, or from any other advice offered.

The user of the product must test the product's suitability for the intended application and purpose before proceeding with the full application of the products. BPA reserves the right to change the properties of its products without notice.

Users must always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request. All sales of BPA are subject to our current terms and conditions.

Local Restrictions

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local product data sheet for the exact description of the application fields.