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Adam Wlodarczyk-Black
Clearbell
Clearbell Capital LLP
2 Harewood Place
Hanover Square
London
W1S 1BX

20 February 2022

Dear Adam Wlodarczyk-Black

Property – Freetrade Echange, 27 Peter St, Manchester, M2 5GB

Thank you for inviting us to carry out an inspection at the above property. Our survey report is enclosed detailing our findings and recommendations.

We have also included a quotation for items of specialist work that Peter Cox will be pleased to undertake for you. For any other defects noted we recommend that you engage a reputable building contractor to inspect and undertake repairs as necessary.

Where applicable, a long term guarantee will be issued for our specialist works on completion of the contract.

With the experience of over 60 years trading nationwide, Peter Cox Ltd is a founder member of the Property Care Association (formerly the BWPDA), registered as a TrustMark contractor and also as a Quality Assured Firm under ISO 9001.

Observations

At the time of the survey we could not gain access to all basement rooms.

FLOORS

Solid floor construction is present..

The testing of solid floors to determine the presence and effectiveness of a suitable damp proof membrane falls outside the scope of our inspection due to the necessity for destructive drilling of the floor slab.

We are therefore unable to give any warranty as to condition or performance.

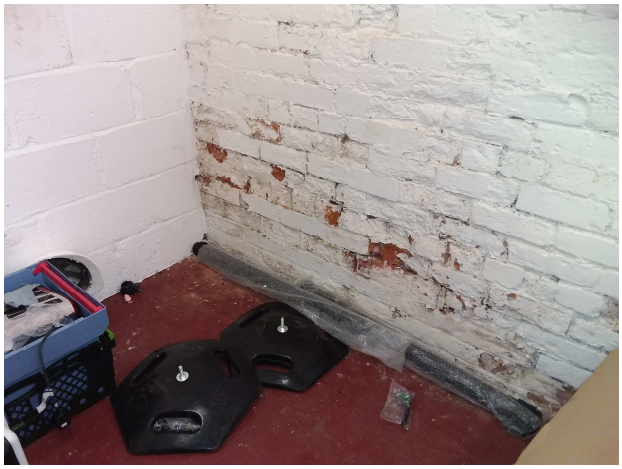
WALLS

The walls are constructed of brick and block work.

At the time of inspection the walls were noted to be damp due to ground water ingress as the rooms are below ground level; however there was no visual evidence of “free water” ingress.

This is resulting in decorations and plasterwork breaking down and becoming salt affected.

Peter Cox Ltd Registered in England no. 2438126 at Compass House, Manor Royal, Crawley, West Sussex. RH10 9PY.











Recommendations

DRY LINING

To the areas scheduled below.

In accordance with your instructions, we have prepared a quotation to provide you with a dry lining system. This will protect the finished décor from contamination of salts or staining and will afford some degree of improved insulation to the solid walls. We have not, and have not been instructed, to carry out a waterproofing survey or provide a specification for the same, which would generally be to a much higher specification. Should water penetration of any kind be a persistent problem you should consider an alternative specification that our surveyor will be happy to supply on request. The two specifications vary greatly in detail and cost and if you think we have misinterpreted your instructions please notify us immediately.

We have included a brief proposed schedule of works together with a costing for the items of specialist work that Peter Cox will be pleased to undertake for you.

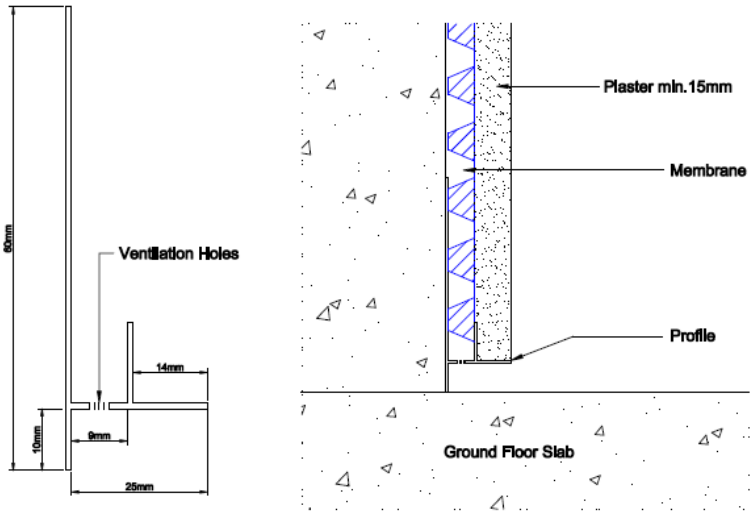
Please note, a full specification and detailed drawings will be provided prior to commencement onsite

Ventilated DryWall System

As the walls do not have signs of free water ingress we recommend the installation of a Ventilated DryWall System.

Peter Cox Are to:

- Apply our deeply penetrating primer for damp, salt-containing substrates this is also a liquid hardener for sealing slurries.
- Apply our cementitious multi-coat waterproofing system up to external ground levels.
- Install cementitious waterproof fillets to the wall / floor junctions which are exposed to pressurised water (external walls and floor joints).
- Apply ‘DryWall’ ventilated membrane to the wall surfaces.



Budget Costing For the design, supply and installation of the above - £600.00 + VAT Per SQM

Client Note

All preparation and finishing works to be carried out by the client.

The costing has been provided subject to contract. This is a budget costing and is only intended as a guide price for you. It does not constitute a full survey/inspection report or infer that a full inspection has been undertaken hence it may not fully reflect all works required. We would welcome the opportunity to discuss these proposals further, where we can determine final construction details and phases.

Unless specified otherwise, our budget costing does not include for any preparatory or other associated works which may be required.

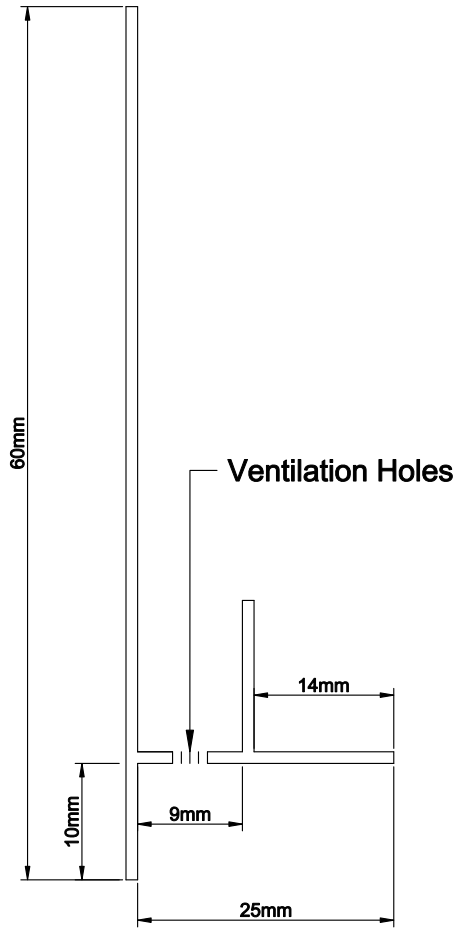
Should you wish to discuss this costing or our design in any greater detail or you would like clarification of the specification or works allowed for in our budget cost, please contact me through this office or on 07771 931927 any time up to 5.30pm.

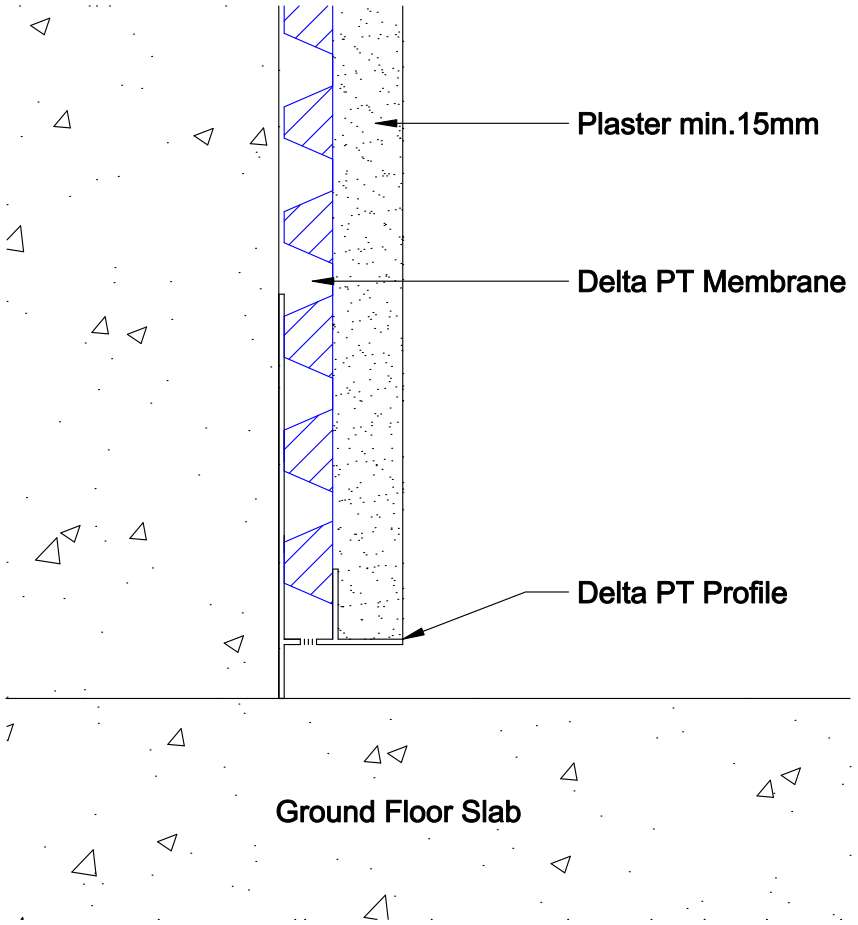
Yours sincerely

Andrew Singleton

Andrew Singleton CSRT, CSSW
Senior Surveyor

Delta PT Profile





DELTA MEMBRANE SYSTEMS LTD.

DRAWING No: DDP-159-1

DRAWING TITLE: DELTA PT VENTILATION PROFILE

DELTA HOUSE, MERLIN WAY, NORTH WEALD, EPPING, ESSEX CM16 6HR

TEL: 01992 523523 FAX: 01992 523250

DRAWING NOTES:

All installations to be carried out in strict accordance with manufacturer's installations instructions.
For further assistance contact Delta Technical on 01992 523 523 or email technical@deltamembranes.com

OFFICE USE:

REVISION No: 1

REVISION DATE: May 2017

Drawn By:

Checked By:

Scale:

System Files: PDF / DWG

DRAWING NOTE:

This drawing is for illustrative purposes only. Drawing not to scale.

PROJECT / COMMENTS:

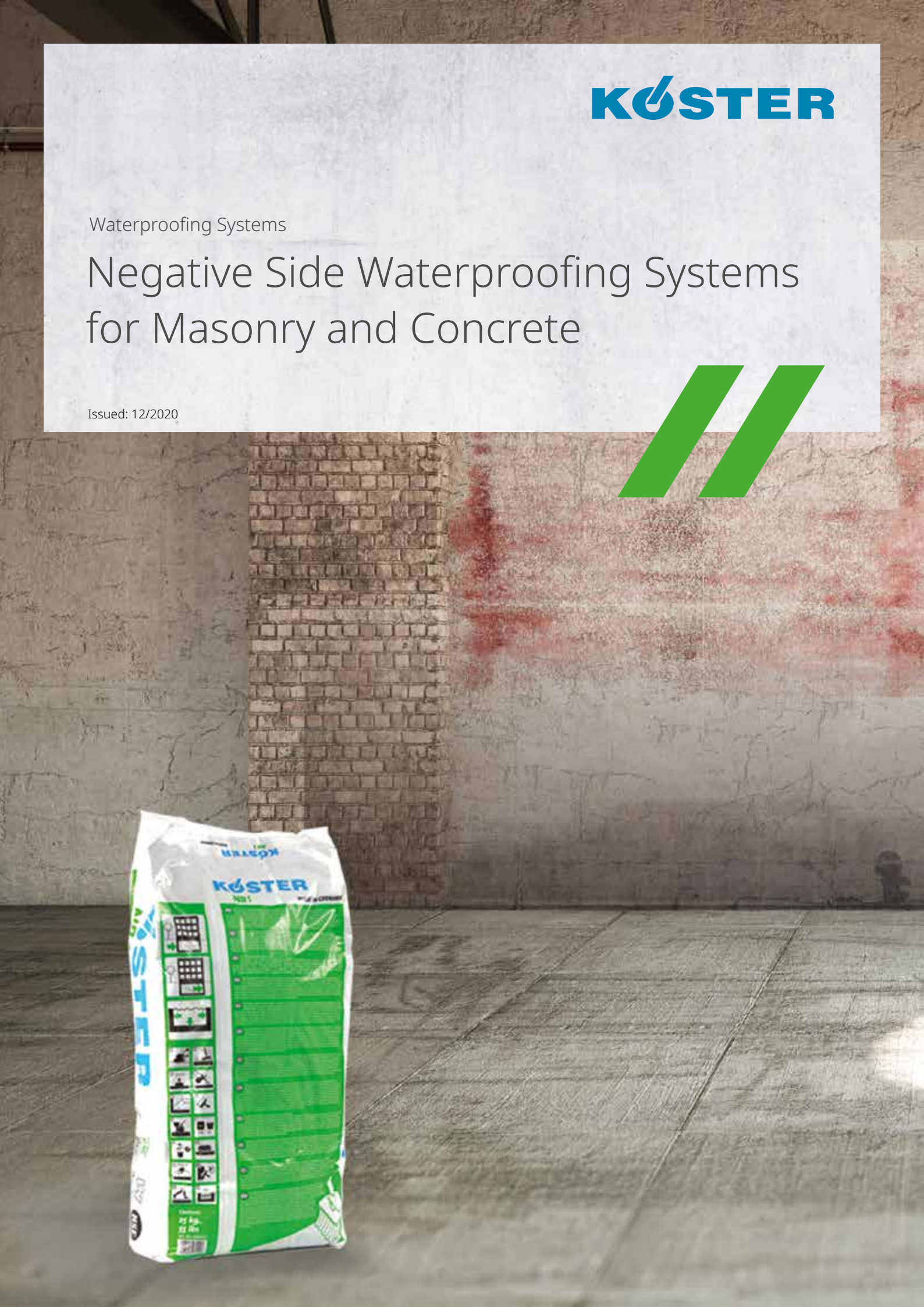
This drawing is the property of Delta Membrane Systems Ltd and must not be loaned or copied without prior written consent

KÖSTER

Waterproofing Systems

Negative Side Waterproofing Systems for Masonry and Concrete

Issued: 12/2020

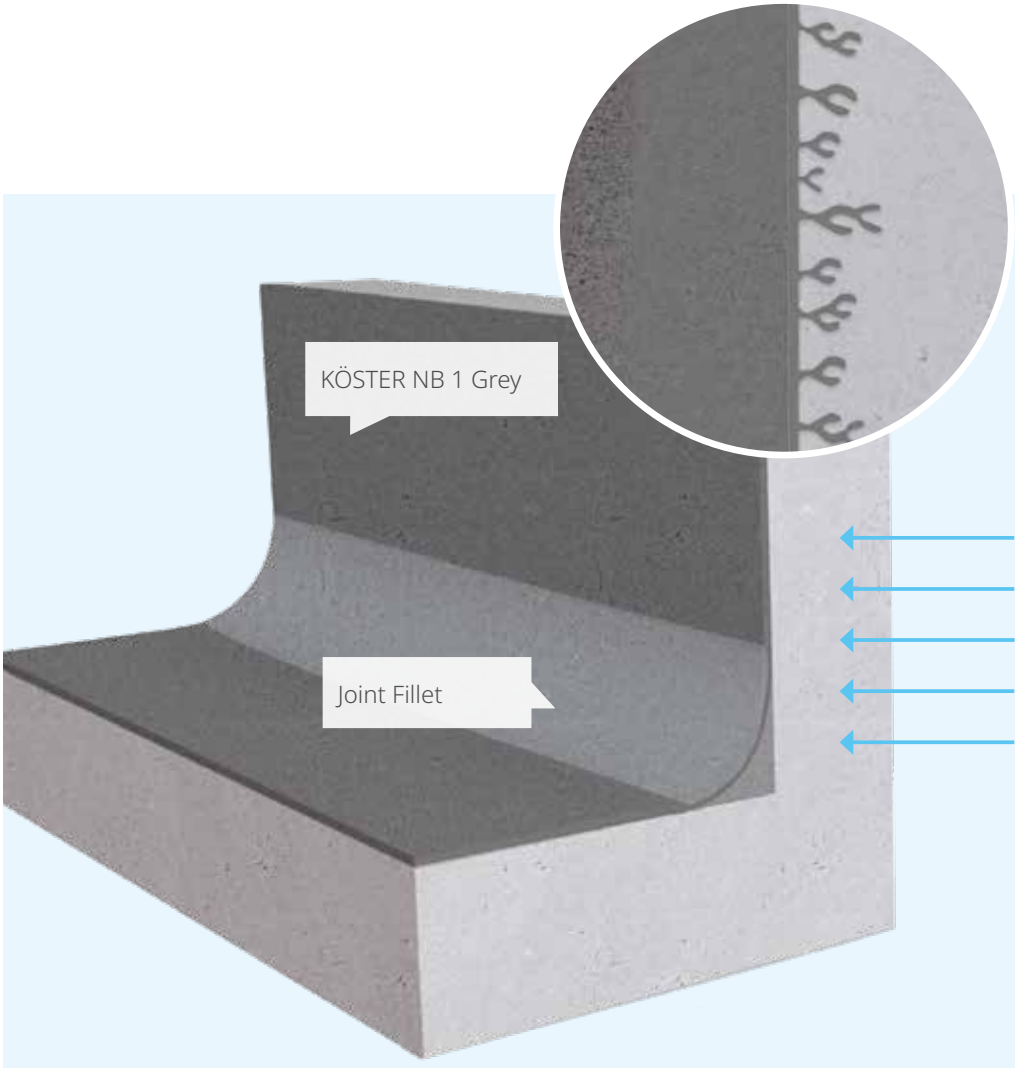


What is negative side waterproofing?

Important:

If possible, the waterproofing material is applied to the positive side of the structure. Only if the positive side is not accessible negative side waterproofing is necessary.

A typical case of negative side waterproofing is when water comes through the walls of a basement and the waterproofing is applied from the inside. In general, negative side waterproofing means that the waterproofing layer is applied to the side of the construction member which is opposite to the side with direct contact to the water. Negative side waterproofing is more difficult than positive side waterproofing because the water penetrates through the construction member behind the waterproofing material and tries "to push it off" the substrate.



Examples
of negative side waterproofing

- inside of basements
- outside of water tanks or potable water tanks
- inside of lift pits
- inside of tunnels
- leaking side of retaining walls
- underside of leaking ceilings

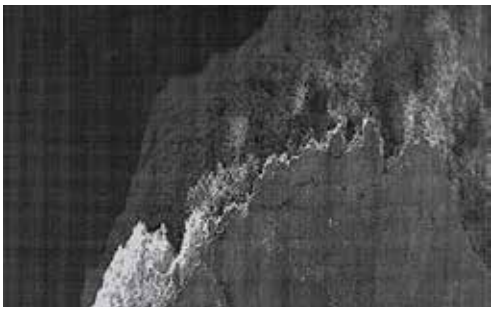


Why use KÖSTER waterproofing systems?

Water that has penetrated through a construction member and has contact to the negative side of the waterproofing layer will always try to delaminate the waterproofing material from the substrate. Water or salt crystals form inside capillaries and voids between the waterproofing material and the substrate. Therefore, especially an elastic coating is likely to delaminate and fail after some time. KÖSTER NB 1 Grey has been developed to waterproof mineral substrates such as masonry and concrete, even from the negative side. The product contains agents which react with moisture and components of the substrate to form crystals which penetrate into the pores and capillaries of the substrate. KÖSTER NB 1 Grey penetrates into the substrate, becomes an integral part of it and makes it waterproof but open to vapor diffusion. It has an expected life time the same as the structure itself. KÖSTER NB 1 Grey cannot delaminate and keeps the substrate permanently waterproof.

Important:

- KÖSTER NB 1 Grey is tested to resist a water pressure of 13 bar (130 meters water head) on the negative side.
- KÖSTER NB 1 Grey does not contain corrosion promoting ingredients.
- KÖSTER NB 1 Grey does not require moisture curing.
- KÖSTER NB 1 Grey is tested also on porous substrate.
- KÖSTER NB 1 Grey creates a visible and measurable waterproofing layer.
- KÖSTER NB 1 Grey is also certified for drinking water purpose.



Electron microscope scan: White areas: latent hydraulic compounds which penetrated into the pore structure of the substrate – and reacted to form a a pore blocking crystal.

How to waterproof a structure from the negative side

For a successful waterproofing the ideal product should have the following properties:

- The waterproofing product should be mineral based just like the brick or concrete substrate and it has to become one with the substrate.
- The waterproofing product ideally penetrates a little into the substrate. That way it cannot be pushed off by the water pressure.
- The material has to be open to vapor diffusion so that water vapor can penetrate the cured coating.
- The material should be free of clorides so that it does not harm the steel reinforcement.
- The material should resist high water pressure from the negative side.
- The product should be easy to apply.
- The product should have self-healing properties to avoid leakages from minor cracks.

KÖSTER NB 1 Grey combines all these properties and can be used for negative side waterproofing against ground moisture, non-pressurized as well as pressurized water. KÖSTER NB 1 Grey is a waterproof, mineral sealing slurry with crystallizing and capillary sealing agents. KÖSTER NB 1 Grey provides excellent pressure and abrasion resistance as well as excellent resistance to a wide range of chemicals. It is also suitable for the waterproofing of potable water tanks.

The mineral substrate has to be sound and solid as well as free of grease, oil and loose particles. Prior to application, the substrate has to be wetted, standing water has to be avoided. Dusty or salt-contaminated substrates are primed with KÖSTER Polysil TG 500.

The material must be mixed using a slow speed mixer whereby the powder should be added to the mixing water. The material is applied in at least two coats with a brush or a suitable spraying device. Frost and strong wind impact during the application and for at least 24 hours afterwards has to be avoided. A 25 kg bag of KÖSTER NB 1 Grey is mixed with 8 l of water. For improved bonding and elastification use 6 l of water and 2 l of KÖSTER SB Bonding Emulsion. For detailed information please consult the technical guidelines at www.koster.eu.

Application



KÖSTER Polysil TG 500



KÖSTER NB 1 Grey, 1st coat



KÖSTER NB 1 Grey, 2nd coat





KÖSTER NB 1 Grey can either be applied with a brush or it can be sprayed onto the surface, e.g. with the KÖSTER Peristaltic Pump.

What if there are active leakages? A difficult situation: waterproofing from the negative side while the water is flowing

Standard cementitious materials have a setting time of at least several hours. In case of active leakages, such materials would just be washed away.

For these cases, KÖSTER has developed the KÖSTER KD System with its components KÖSTER KD 1 Base, KÖSTER KD 2 Blitz Powder and KÖSTER KD 3 Sealer.

KÖSTER KD 2 Blitz Powder is a highly reactive powder with an extremely short setting time. It stops flowing water within seconds after being rubbed directly into the leaking surface.

KÖSTER KD 1 Base is a crystallizing slurry which is applied together with KÖSTER KD 2 Blitz Powder and KÖSTER KD 3 Sealer for instant setting. KÖSTER KD 3 Sealer penetrates deeply into the substrate and forms an insoluble compound. It blocks the pores and stops the flow of water permanently by its continuous crystallization process.

Application: stopping active leaks



An active leakage is sealed instantly after applying KÖSTER KD 2 Blitz Powder.

Stopping active leaks

Form KÖSTER KD 2 Blitz Powder into a firm ball and press the air out of the powder. Then press the ball of powder onto the leakage until it is stopped.

Application of surface waterproofing:



KÖSTER KD 1 Base



KÖSTER KD 2 Blitz Powder



KÖSTER KD 3 Sealant



2x KÖSTER KD 1 Base

Area Waterproofing:

After stopping leakages, the surrounding surface has to be waterproofed:
Mix as much KÖSTER KD 1 Base as can be applied within 10 minutes with water into a viscous, spreadable mass (slurry). Apply the slurry onto the substrate using a firm brush. Then immediately rub KÖSTER KD 2 Blitz Powder into the fresh, moist slurry by hand until the surface is dry. Without waiting, brush on KÖSTER KD 3 Sealer liquid with a clean brush. Immediately afterwards and again after approx. 30 minutes, repeat step 1 (KÖSTER KD 1 Base). The maximum total thickness should be less than 4 mm.

How to treat salt contaminated substrates?

All mineral substrates contain salts to some degree. In a higher concentration, e.g. due to salt uptake in agricultural buildings, by sea water or fertilizers etc., salts can become problematic. Salts are water soluble and therefore can be transported through the capillary system of the building material. On the surface, water evaporates and the salts start to form crystals mainly in the pores that are close to the surface. During this process, the salts expand tremendously in volume.

When sufficient crystallization has taken place, the pressure in the capillaries will get so high that the building material is destroyed. The material loses its mechanical strength and it becomes brittle, resulting in a damaged surface.

A typical sign of salt contamination is salt efflorescence, mostly seen as a whitish substance on the surface of masonry or concrete. Often the salts are transported from the surrounding soil through the capillary system of the building materials by rising damp. After a while, paints or conventional plasters are simply pushed off by the pressure of salt crystallization.

For restoring salt contaminated substrates, KÖSTER offers products that can be used in combination with our waterproofing products: KÖSTER Polysil TG 500 and KÖSTER Restoration Plaster. KÖSTER Polysil TG 500 is a thin fluid product based on a combination of polymers and silicates. When it is sprayed onto the surface of a wall, it penetrates into the capil-

laries. It reduces the pore volume, lowering the danger of renewed salt efflorescence. It also increases the chemical and mechanical resistance of mineral building materials. The illustrations below show what happens in the capillary through the application of KÖSTER Polysil TG 500. The grey area represents the silicified, immobilized zone of the pores. The salts, shown as silver polygons, are enclosed in the immobilized zone. KÖSTER Polysil TG 500 has a polymer ingredient which encapsules the salt molecules and reduces their mobility.



Typical damage through salt efflorescence.





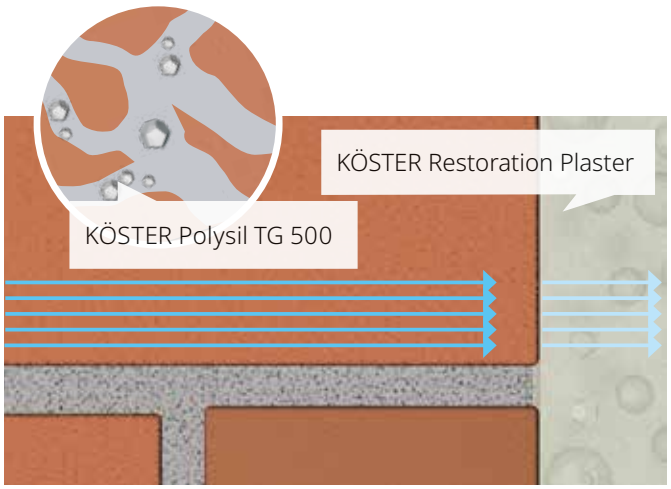
The interior walls of these buildings were restored with KÖSTER Restoration Plaster White.

If a negative side waterproofing is required, KÖSTER NB 1 Grey is applied in two layers. After complete curing, KÖSTER Restoration Plaster Key is applied. This fast-setting, comparatively coarse mortar serves as a bonding bridge for the KÖSTER Restoration Plaster. At the same time it facilitates and accelerates the application of the restoration plaster.

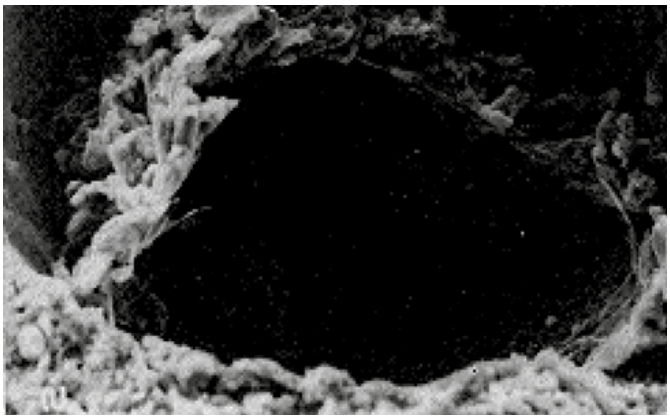
The Plaster Key can be applied with a trowel or sprayed on with a suitable machine. Masonry joints must not be completely filled with the Plaster Key. After approx. 60 minutes, rework with KÖSTER Restoration Plasters (minimum layer thickness: 2 cm).

Additionally, KÖSTER Restoration Plasters are applied to provide a highly porous breathable layer on the wall. The pores in KÖSTER Restoration Plasters provide sufficient space for salt crystallization so that salt efflorescence is stopped. The salts crystallize in the pores.

Also, damp walls dry out due to the microstructure of the plaster surface. KÖSTER Restoration Plasters absorb water in vapor form so that the walls can “breathe”. Thereby, KÖSTER Restoration Plasters provide a comfortable and healthy room climate.



The cristallization of the salts in the pores of the KÖSTER Restoration Plaster prevents the salts to cause damage.



Application



Remove old plaster. Fill breakouts and holes with KÖSTER Repair Mortar. Spray KÖSTER Polysil TG 500 onto the surface to block salts and harden the substrate.



If negative side waterproofing is required, KÖSTER NB 1 Grey is applied in two layers.



Next, KÖSTER Restoration Plaster Key is applied to ensure optimal adhesion of the KÖSTER Restoration Plaster.



KÖSTER Restoration Plaster is applied to the fully cured key with a trowel or a suitable spray pump. The surface is then floated smooth.

Technical Data



Crystallizing waterproofing system for positive and negative side waterproofing

Technical Data
KÖSTER NB 1 Grey

- Compressive strength (28 days) > 35 N/mm²
- Flexural tensile strength (28 days) > 10 N/mm²
- Adhesive tensile strength > 1.5 N/mm²
- Waterproof against pressurised water (negative side) up to 13 bar
- Coefficient of water vapor diffusion resistance: 60
- Pot life: approx. 2 hours
- Resistant to foot traffic after approx. 2 days
- Full cure after approx. 2 weeks

Consumption
KÖSTER NB 1 Grey

- In cases of ground moisture min. 3 kg/m² (2 coats)
- In cases of non-pressurized water min. 3 kg/m² (2 coats)
- In cases of pressurized water min. 4 kg/m² (2-3 coats)
- In cases of negative side waterproofing min. 3 kg/m² (2 coats)

Important Product Tests:
KÖSTER NB 1 Grey

- Meets requirements according to the „German Technical and Scientific Association for Gas and Water", work sheet W270
- Resistant to stresses by sulfates and chlorides
- Resistant to a water pressure of 13 bar on the negative side (130 m of water head)
- Approved by the German building authorities ("Test certificate for official approval by the building authorities")
- Approved for use in potable water environments, tested according to the recommendations of the work group "Drinking water concerns of the commission on synthetics of the Federal Public Health Department"
- Contains crystallizing components
- Self-healing properties on micro-cracks
- Resistant to freeze and thaw cycles, the bonding of the material remains excellent



Salt blocker and hardener

Technical Data

KÖSTER Polysil TG 500

- Specific gravity: 1.03 g/cm3
- Surface: transparent, slightly sticky
- Application of next layer: - after 30 minutes: cementitious building materials
  - after min 24 hours: acrylic- and silicate-paints

Consumption

- As deep penetrating primer: approx. 100 to 130 g/m²
- Under bitumen thick film sealants: approx. 150 g/m²
- In cases of highly absorbent surfaces, use up to double the amount.



Negative side waterproofing system against active leakages

Technical Data

KÖSTER KD System

- KÖSTER KD 1 Base: Setting time (+20 °C, 65 % relative humidity) approx. 15 min.
- KÖSTER KD 2 Blitz Powder: Setting time within seconds when sealing active leakages
- KÖSTER KD 3 Sealer: Reaction time (+20 °C, 65 % relative humidity) 2 – 3 hours
- KÖSTER KD System: Waterproof against pressurized water up to 7 bar (negative side)

Consumption

- KÖSTER KD 1 Base: approx. 1.5 – 2.5 kg/m²
- KÖSTER KD 2 Blitz: approx. 1.0 – 2.0 kg/m²
- KÖSTER KD 3 Sealer: approx. 0.5 kg/m²



Highly porous, salt resistant plaster for a healthy room climate

Technical Data

KÖSTER Restoration Plaster White

- Density of fresh mortar: 1.3 t/m³
- Air void contents (fresh mortar): 34 vol-%
- Compressive strength: > 2.5 N/mm²
- Flexural tensile strength: approx. 1.4 N/mm²
- Porosity: approx. 41 vol-%
- Beginning of setting: after approx. 3 hours

Consumption

- Approx. 12 kg/m² per cm of layer thickness of the plaster

Additionally available

- KÖSTER Restoration Plaster Grey
- KÖSTER Restoration Plaster White/Grey/Light
- KÖSTER Restoration Plaster White/Fast
- KÖSTER Restoration Plaster Key

Important Product Tests:
KÖSTER KD System

- Fast waterproofing against pressurized water and active leakages
- Resistant to stresses by sulfates and chlorides
- Test certificate by LAW Engineering , can be applied against pressurized water up to 7 bar from the negative side

How to waterproof wall floor junctions, joints and cracks?

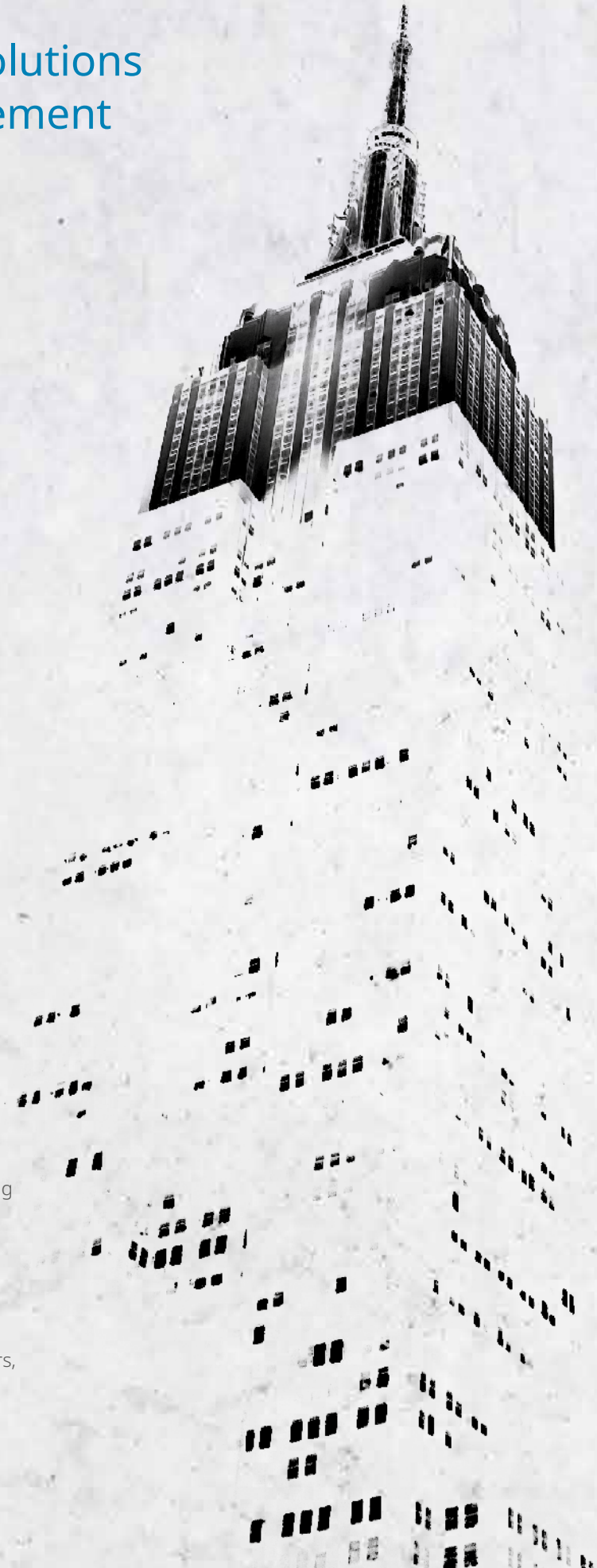
When carrying out waterproofing works, wall/floor junctions, cracks and joints are typical examples of areas which require special attention. These "sensitive areas" have to be taken care of in the right way before the waterproofing can be applied. They often require specific materials and application techniques in order to be permanently waterproof. For example: At wall/floor junctions fillets have to be installed; cracks and joints have to be sealed elastically or rigidly – depending on the requirements of the specific construction member.
KÖSTER provides a comprehensive range of materials, accessories and equipment for crack injection and joint sealing, e.g. KÖSTER Joint Sealant FS-V or KÖSTER Joint Sealant FS-H, KÖSTER Injection Systems and KÖSTER KB-Flex 200 Sealing Paste.

Please refer to our catalog "The Green Pages of Construction Chemicals" and contact our technical department.



KÖSTER 2 IN 1 | KÖSTER KB Flex 200 Sealing Paste | KÖSTER Joint Sealant FS

Waterproofing solutions from roof to basement



We have been developing and producing waterproofing systems since 1982 that protect and preserve valuable building structures, meeting with the highest standards all along the way. In short, where water is a problem, we are there with a solution for the owners, engineers, architects, and all our clients.



We are there for you – worldwide.

// Contact us

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E-Mail: info@koster.eu

www.koster.eu

KÖSTER
Waterproofing Systems

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