MS CT CT215 A 04.24

Method Statement

Floor Coating with KÖSTER CT 215 Universal Floor

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KÖSTER
Waterproofing Systems

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Waterproofing Systems

1 General information

1.1 Scope

This method statement is intended for use by developers, contractors and applicators as a general guideline for the application of the floor coating system with KÖSTER CT 215 Universal Floor.

While this document describes the tools, equipment, materials and process for preparing and installing the floor coating system, it must be used and referred to, in combination with all other relevant technical information available for the product and its components.

1.2 Manufacturer

KÖSTER BAUCHEMIE AG
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1.3 Definitions

Water vapor permeable
Refers to the ability of a material to allow water vapor molecules to pass through it. In the context of water-based epoxy materials, it means that the epoxy coating or the substance has the capability to permit the passage of water vapor while still maintain its integrity and properties. A water vapor permeable epoxy material helps prevent moisture build up and potential issues like blistering, delamination, or mold growth.

Adhesive tensile strength
Refers to the ability of a material, such as a water based epoxy, to withstand pulling forces when bonded to another material or substrate. Specifically, in the context of water based epoxy, adhesive tensile strength would indicate how well the epoxy adheres to a surface when subjected to tension or pulling.

Abrasion resistance
Refers to the ability of a material to withstand wear and damage caused by friction or rubbing against another surface. It is a measure of how well a material can resist surface degradation or loss of material when subjected to abrasive forces.

2 System description

2.1 System features

The KÖSTER CT 215 Universal Floor System is an easy to apply coating and sealing system for mineral substrates for light to moderate mechanical and chemical stresses in commercial and private real estate. Light stresses are e.g., when used in a storage room, living room or offices. Medium stresses arise e.g., when loaded with forklifts or pallet trucks, driving in private garages or the effects of de-icing salt from vehicles, hallways & shops, among others.

As a water-based epoxy resin, KÖSTER CT 215 Universal Floor is also suitable for coating damp substrates. The epoxy resin KÖSTER CT 215 Universal Floor is applied to the prepared substrate as primer, as well as a leveling flow coat. With the incorporation of KÖSTER Filler fine, layer thicknesses of up to 2 mm can be achieved. For enhanced cleaning properties as well as a pigmented surface finish, KÖSTER CT 215 Universal Floor can be applied undiluted as a final sealant. KÖSTER CT 215 Universal Floor is a special universal coating that combines a colored primer, coating and sealing system for light to medium mechanical and chemical loads in the same product. The system is open to water vapor diffusion, therefore suitable for damp surfaces. KÖSTER CT 215 Universal Floor is a solvent-free, water-based epoxy resin and VOC free.

2.2 Characteristics/Advantages

- Water vapor permeable
- Highly decorative
- Easy to apply
- Numerous finishes are possible as it can be personalized with broadcast material
- VOC free
- Scratch resistant
- Available in three standard colors in 3 and 10 kg containers
- Available in wide range of RAL colors (only 10 kg containers)
- For floor and wall surfaces
- High abrasion resistance
- Tested slip resistance
- Can be mixed with filler fine to achieve a higher layer thickness (up to 2 mm)
- Layer thickness of 0.2 – 2.0 mm possible
- Extremely versatile

2.3 Main products and components

KÖSTER CT 215 Universal Floor
KÖSTER CT 215 Universal Floor is a special universal coating that combines a colored primer, coating and sealing system for light to medium mechanical and chemical loads in the same product.

See online

KÖSTER Color-Chips
UV and chemically resistant decorative colored chips for broadcasting into the surface of epoxy resin.

See online

KÖSTER TS Transparent
Two-component UV and weather stable, flexible, solvent free, transparent topcoat for light to medium mechanical loads. Based on Polyurea and semi-glossy finish.

See online

KÖSTER CT 327 1C Sealer
One-component, Silane based, flexible, UV and weather-resistant, solvent free, transparent, and glossy top sealer.

See online

KÖSTER Top Coat 1C Matte
One-component aqueous PU sealant for both broadcast or smooth coatings and is characterized by high abrasion resistance, chemical resistance, and UV resistance. Due its rapid curing, the coating can be trafficked after just 24 hours. After curing, a matt finish is achieved.

See online

KÖSTER Filler Fine
is a special, solvent free, mineral filler, which can be added into water-based and solvent free reaction resin systems during the application. It improves the floor coating´s resistance against mechanical stresses, particularly with high layer thicknesses.

See online

KÖSTER Anti-Slip Granulate 20
Chemical resistant polymer granulate, which increases slip resistance of water based and solvent free top coating. Varying the dosage will alter the grade of slip resistance.

See online

KÖSTER Universal Cleaner
Solvent free cleaning agent for bituminous materials and epoxy resins for example KÖSTER KB-Pox IN, KÖSTER VAP I 2000, and KÖSTER CT 121.

See online

KÖSTER PUR Cleaner
Cleaning agent for the removal of fresh polyurethane for example KÖSTER TS Transparent, KÖSTER Top Coat 1C Matte, KÖSTER 327 1C Sealer.

See online

2.4 Associated products

KÖSTER CT 121

See online

KÖSTER KB-Pox IN

See online

KÖSTER VAP I 2000

See online

2.5 Associated literature

- Technical Data Sheet
- Chemical Resistance - KÖSTER CT 215 Universal Floor
- Product declaration of performance CT 215 Universal Floor (EN 13813)
- Product declaration of performance CT 215 Universal Floor (EN 1504-2)
- System data sheet KÖSTER CT 215 Universal Floor
- System brochure KÖSTER CT 215 Universal Floor
- System brochure floor coatings

3 Tools and Equipment

3.1 Tools

KÖSTER Resin Roller
150 mm / 250 mm

KÖSTER Resin Stirrer
75 mm / 100 m

KÖSTER Squeegee

Flat Squeegee, hardness: soft, 60 cm

Flat Squeegee, hardness> medium, 60 cm

Spike Shoes

KÖSTER Spiked Roller

KÖSTER Paint roller handle for spiked roller

KÖSTER Short scraper for toothed blades, Alu, 28 cm

KÖSTER Toothed blade 28 cm S2.66

KÖSTER Toothed blade 28 cm S2

KÖSTER Toothed blade 28 cm S4

KÖSTER Toothed blade 28 cm S6

Trowel

Mixing vessels
(10 l and 30 l)

3.2 Equipment

Thermohygrometer

Single paddle mixer

Hand grinding machine

Shot blasting machine

Industrial Vaccum

3.3 Cleaning

KÖSTER CT 215 Universal Floor
Clean all tools and equipment immediately after use with water. Cured and hardened material can only be removed mechanically.

KÖSTER CT 327 1C Sealer
Clean all tools and equipment immediately after use with KÖSTER Universal Cleaner. Cured and hardened material can only be removed mechanically.

KÖSTER TS Transparent / KÖSTER Top Coat 1C Matte
Clean all tools and equipment immediately after use with KÖSTER PUR Cleaner. Cured and hardened material can only be removed mechanically.

4 Environmental, health and safety

4.1 Personal Protection Equipment (PPE)

The following is a short overview of Personal Protective Equipment and serves only as a guideline. Contractors and Employers are responsible for meeting the occupational safety guidelines in their countries, states, and localities.

Eye protection
Employers must be sure that their employees wear appropriate eye and face protection and that the selected form of protection is appropriate to the work being performed and properly fits each worker exposed to the hazard.

Head protection
Employers must ensure that their employees wear head protection if any of the following apply: Objects might fall from above and strike them on the head; they might bump their heads against fixed objects, such as exposed pipes or beams; or there is a possibility of accidental head contact with electrical hazards.

Foot and Leg Protection
Employees who face possible foot or leg injuries from falling or rolling objects or from crushing or penetrating materials should wear protective footwear.

Hand Protection
When selecting gloves to protect against exposure hazards, always check with the manufacturer or review the manufacturer's product literature to determine the gloves' effectiveness against specific workplace chemicals and conditions. Gloves commonly used are: Coated fabric gloves and Chemical - and Liquid - Resistant Gloves

Hearing protection
Suitable hearing protection must be provided for the job environment.

4.2 Material safety & First Aid

Every KÖSTER product is labeled with specific information and symbols as to the related dangers. Please consult the respective Material Safety Data Sheet for specifics.

If inhaled:
Provide fresh air. Move victim to fresh air. Put victim at rest and keep warm. In case of irregular breathing or respiratory arrest provide artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. If unconscious but breathing normally, place in recovery position and seek medical advice.

In case of contact with eyes:
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician in any case!

After contact with skin:
After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Call a doctor if you feel unwell.

After ingestion:
Rinse mouth immediately and drink plenty of water. Remove casualty to fresh air and keep warm and at rest. Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Caution if victim vomits: risk of aspiration! If unconscious but breathing normally, place in recovery position and seek medical advice.

4.3 Waste disposal

Disposal recommendations
Do not allow to enter surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - used product
MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND
INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately
Collected fractions (except 15 01); paint, inks, adhesives and resins other than those mentioned in
20 01 27

Contaminated packaging
non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

5 Coatings types

5.1 Sealing

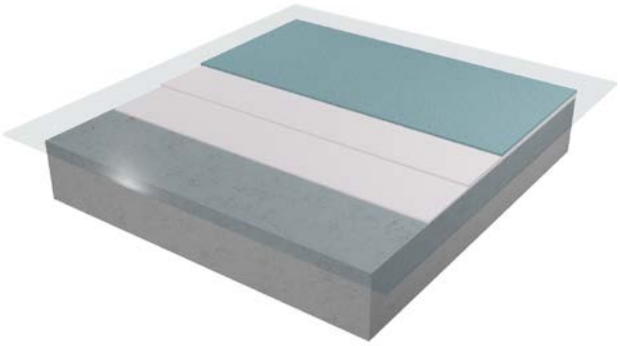
Are an economical way to protect floors and achieve good cleanability. This can be accomplished by a layer thickness of up to 0.2 mm. KÖSTER CT 215 Universal Floor follows the surface structures and roughness depths are only slightly compensated. By adding KÖSTER Anti-slip Granulate 20, a non-slip floor is attained.

5.2 Coating

Compensate for minor irregularities on the surface. Due to the even distribution of the material, KÖSTER CT 215 Universal Floor flows in so that a smooth surface is created. With the addition of the additive KÖSTER Filler Fine, a layer thickness up to 2.00 mm can be achieved.

5.3 Decorative broadcast

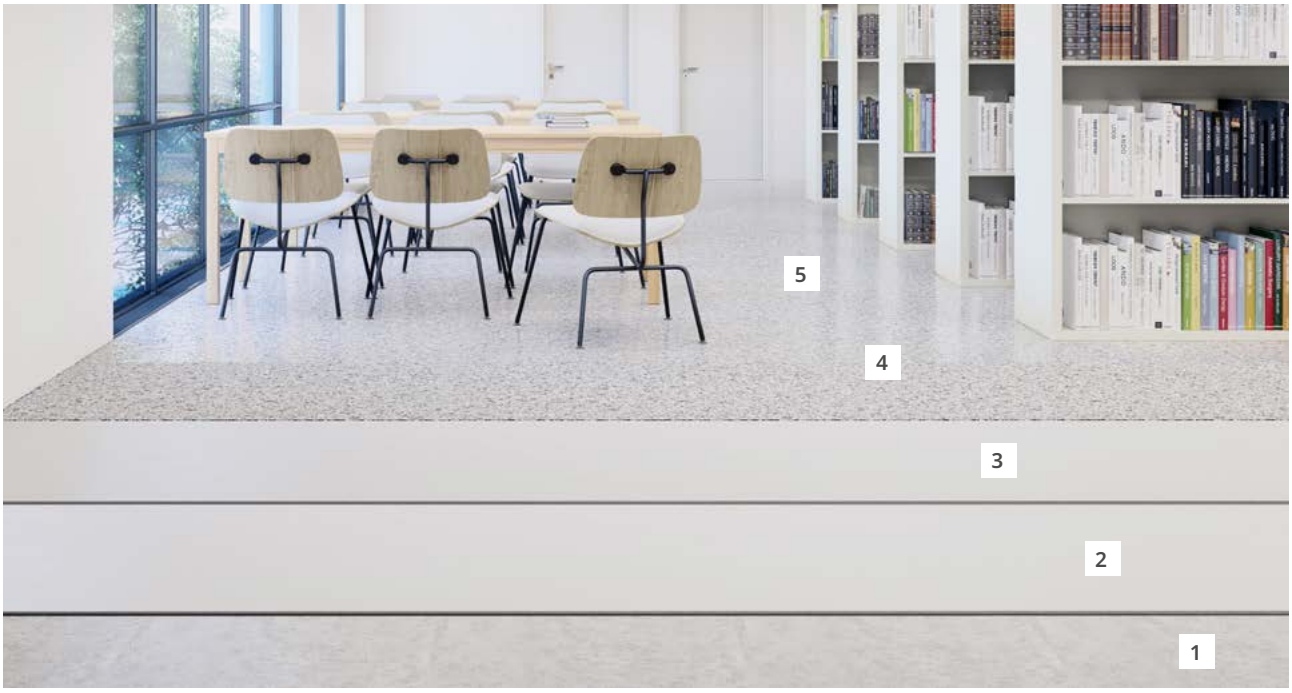
KÖSTER Color Chips can be used as a decorative infill layer in partial or full scattering in many different colors. These are reworked with the UV-stable, non-slip transparent sealant KÖSTER CT 327 1C Sealer or with the high abrasion, chemical, mechanical and UV resistant KÖSTER Top Coat 1C Matte or with the KÖSTER TS transparent which is a two-component, glossy that distinguishes itself through high chemical, mechanical, and UV resistant.



6 Fields of application

- Production areas
- Storage areas
- Sales areas
- Garages
- Balconies and terraces
- Trafficked paths

6.1 An example for floor coating a commercial area



1. Substrate	Concrete
2. Primer	KÖSTER CT 215 Universal Floor
3. Floor coating	KÖSTER CT 215 Universal Floor
4. Decoration	KÖSTER Color Chips
5. Top coat	KÖSTER TS transparent
	KÖSTER Top Coat 1C Matte
	KÖSTER 327 1C Sealer
	KÖSTER Anti-Slip Granulate 20

Installation process:

The KÖSTER Universal Floor System is an easy to apply coating and sealing system for mineral substrates for light to moderate mechanical and chemical stresses in commercial and private areas. Light stresses are e.g., when used in a storage room. Medium stresses arise e.g., when loaded with forklifts or pallet trucks, driving in private garages or the effects of de-icing salt from vehicles. As a water-based epoxy resin, KÖSTER CT 215 Universal Floor is also suitable for coating damp substrates. In cases where moisture can be trapped behind the coating, such as non-waterproofed floor slabs or balconies, KÖSTER VAP I 2000 should be applied to protect against moisture and water vapor transmission. The epoxy resin KÖSTER CT 215 Universal Floor is applied to the prepared substrate as primer, as well as a leveling flow coat. With the incorporation of KÖSTER Filler Fine, layer thicknesses of up to 2 mm can be achieved. Through the use of KÖSTER Color-Chips in contrast and rejection broadcast and the incorporation of KÖSTER Anti-Slip Granules 20, a wide variety of individual surface structures and designs can be achieved. When applied outside, the KÖSTER CT 215 Universal Floor must be fully broadcasted to rejection and sealed. By medium stresses, the two-component sealant KÖSTER TS Transparent or 1 component KÖSTER CT 327 1C Sealer must be used or for matt finish, KÖSTER Top coat 1C Matte is applied.

7 Substrate condition

7.1 Project site conditions

7.1.1 Application temperature

It is best to process the material at temperatures between +15 °C and +30 °C, whereby the floor and the room temperature should be between +10 °C and +25 °C during processing and curing. A minimum temperature difference of +3 °C to the dew point must be maintained during and for at least 24 hour after processing.

7.1.2 Moisture content in substrate

Prior to application, moisture content of the substrate should be determined and are typically recommended to be below 4 %. However, if higher refer to our moisture mitigation system such as KÖSTER VAP I 2000. Please refer to system data sheet for more information.

7.1.3 Relative humidity

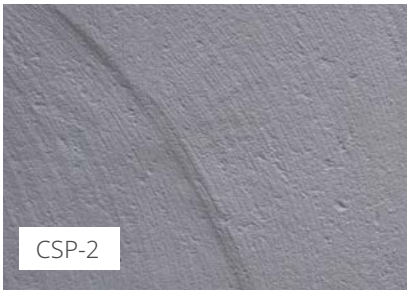
Relative humidity should not exceed 80 % as it may affect the final results and curing process. Exceeding the recommended RH limit can potentially lead to issues such as poor adhesion, bubbling, blistering, or premature coating failure.

7.2 Substrate requirements

Suitable substrates include concrete and screed as well as mineral plasters. The substrates must be free of laitance, dust, oils and greases. The surface may be damp, but not permanently exposed to rear-facing moisture. The surface must be prepared by suitable means (preferably shotblasting, or grinding). The substrate must have a minimum adhesive tensile strength of 1.5 N/mm^2.

7.3 Surface preparations

Concrete surfaces must be prepared to have an open pore surface free of laitance. The surface roughness must present a structure corresponding to a Concrete Surface Profile CSP-1, CSP-2, or CSP-3; according to the guidelines by the International Concrete Repair Institute (ICRI). The surface must then be intensively cleaned prior to the installation.



Suitable surface preparation methods are grinding and vacuum shot blasting.

Grinding
Suitable for creating a CSP-1 to CSP-3.

Vacuum shot blasting

7.4 Levelling & repairing the surface

- Defects and minor breakouts in horizontal and slightly inclined substrates can be closed in advance with a mixture of KÖSTER CT 215 Universal Floor and KÖSTER Filler Fine in a mixing ratio of at least 1:5. A stiff material is created from the mixture.
- Sloping surfaces (more than 1.5 % slope) must be leveled with a filler of KÖSTER WP Mortar in a minimum layer thickness of 5 mm.
- Cracks in the floor should be treated beforehand with KÖSTER KB-Pox IN through saturation method and allow to cure for 24 hours before commencing with the coating work.
- Uneven, horizontal floors are previously leveled with KÖSTER SL Protect / SL Premium. For this purpose, prime the prepared substrate with KÖSTER SL Primer. Then apply KÖSTER SL Protect / SL Premium in the appropriate layer thickness. Before application of KÖSTER CT 215 Universal Floor, lightly sand the surface of KÖSTER SL Protect / SL Premium. Please refer to the system data sheet for more information.

8 Protection

Mask off areas:

- Use a painter´s tape to mask off any areas you don't want to coat, such as walls, baseboards or fixtures.
- Make sure to press the tape firmly to create a tight seal to prevent any seepage under the tape.

9 Application techniques

9.1 Mixing of the KÖSTER CT 215 Universal Floor

KÖSTER CT 215 Universal Floor can be applied as a primer, as a coat up to 0.2 mm, as a floor leveling up to 2 mm with the addition of KÖSTER Filler Fine, and as a top coat protection.

As a primer

The material should be brought to at least +15 °C. Mix the KÖSTER CT 215 Universal Floor components (A and B) with an electrical mixer below 300 rpm for at least 2 minutes until a homogeneous consistency is achieved. The KÖSTER Resin Stirrer is suitable as a mixing attachment for good mixing results. Component A of the KÖSTER CT 215 Universal Floor must be stirred before adding the B component. While mixing, unmixed components must be scraped from the mixing container walls. To avoid mixing errors the material is re-potted and mixed again for 1 minute. Repotting ensures container build-up is thoroughly mixed into the material.

After mixing the components A and B, KÖSTER CT 215 Universal Floor is diluted with 10 - 25 mass % of clean tap water.

As a coating (up to 0.2 mm)

The temperature-controlled components A and B must be mixed intensively with a mechanically driven stirrer such as KÖSTER Resin Stirrer until a homogenous consistency is reached (mixing time approx. 2 minutes). Repotting and mixing again is necessary (mixing time is approx. 1 minute).

As a floor leveling (up to 2 mm)

The temperature-controlled components A and B must be mixed intensively with a mechanically driven stirrer such as KÖSTER Resin Stirrer until a homogenous consistency is reached (mixing time approx. 2 minutes). After repotting of KÖSTER CT 215 Universal Floor, KÖSTER Filler Fine is added in a mixing ratio 1:1 by weight of the mixture with constant stirring. To increase the flowability, immediately add up to 5 % by weight of pure tap water. For example, for 10 kg of KÖSTER CT 215 Universal Floor and 10 kg of KÖSTER Filler Fine, a maximum of 1 liter of clean water can be added.
When applying several containers, the quantity of water to be added must be kept exactly the same. Different amounts of water can lead to differences in color of the final surface.

9.2 Applying KÖSTER CT 215 Universal Floor

9.2.1 As a primer

The material is poured onto the substrate and is spread evenly onto the substrate and with the KÖSTER Resin Roller rolled in both direction (crosswise). Avoid accumulation and puddling. In the case of highly absorbent and open-pored surfaces, less water should be added. If possible, check the absorbency before starting work.

9.2.2 As a self-leveling

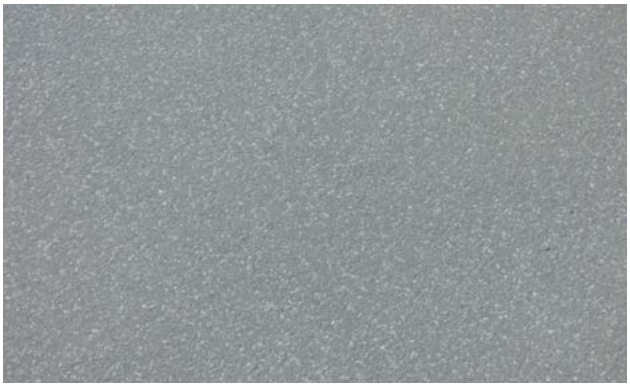
When applying KÖSTER CT 215 Universal Floor with the addition of KÖSTER Filler Fine, use a suitable strip trowel according to the required or desired layer thickness. The layer thickness depends on the toothed strip and the viscosity of the material. For example, the following average layer thicknesses can be achieved: With the "S6" strip approx. 1.0 mm, "S4" approx. 1.6 mm and "S2.66" approx. 2.0 mm (for more details see Tools section). The strips can be used in a hand-held quick filler for working on detail points or in a surface squeegee for larger areas. For optimum deaeration and to increase the flow properties, the coating is immediately rolled on with a metal spiked roller in a crosswise manner.
The material was mixed in a ratio 1 : 1 with KÖSTER Filler Fine and distributed on the substrate using a spiked toothed rake. To adjust the consistency, 1 liter of water was added to the mixture.

9.2.3 As a pigmented sealant

KÖSTER CT 215 Universal Floor is applied undiluted to the surface immediately after mixing, (after 4 hours but no later than 24 hours after application of the primer or the leveling coat) with a KÖSTER Resin Roller. The instructions for mixing KÖSTER CT 215 Universal Floor as described in the Primer section apply. The addition of water or solvents is not permitted in this case!
On even surfaces, the material is spread evenly over the surface with a KÖSTER Resin Roller and then carefully back rolled in two directions.
The coated surface must be adequately ventilated during the curing phase of KÖSTER CT 215 Universal Floor to dissipate the water vapor emerging from the coating and thereby prevent color shading.
Without the addition of KÖSTER Anti-Slip Granulate 20, a tested slip resistance class of R 10 is achieved. To achieve a tested slip resistance of class R11, 2 M% (20 g/kg) KÖSTER Anti-slip Granulate 20 is mixed into the material after mixing the A and B components. After drying, the pigmented sealant with KÖSTER Anti-Slip Granulate 20 is finished. Depending on the composition of the coating, a slip resistance class R12 can also be achieved (test procedures/principles according to DIN 51130 (2014-02) and DGUV rule 108-003 (formerly BGR 181 and GUV-R 181)). For other possible compositions consult the KÖSTER technical department.

9.3 Contrast or full surface broadcast with KÖSTER Color-Chips

KÖSTER Color-Chips are broadcasted into the fresh coating as contrast (from approx. 50 g/m²) or to rejection (approx. 0.7 - 1.0 kg/m²), the excess is removed after the KÖSTER CT 215 Universal Floor has cured, the excess is removed from the surface using a hard broom or a vacuum cleaner.
In exterior areas, always broadcast the KÖSTER Color-Chips to rejection, followed by a transparent sealer. Before vacuuming and cleaning the surfaces, we recommend intermediate sanding with sandpaper (120 grit) or smoothing the KÖSTER Color-Chips tips with a clean smoothing trowel or a metal scraper. The swept off material (without soiling) can be reused.



9.4 Broadcast with other material

If colored quartz or kiln-dried quartz sand is used for broadcasting (the suitability of the broadcasting materials used must be given), the surface must be covered with a sealant. The sealant is applied over the surface and distributed with a KÖSTER Rubber Squeegee. Afterwards, it is worked evenly crosswise with the KÖSTER Resin Roller.

9.5 Transparent sealer / Top coat

KÖSTER CT 327 1C Sealer is used for light stress requirements, and KÖSTER TS Transparent for light to medium usage requirements. Both materials are glossy.
As a matt sealer KÖSTER Top Coat 1C matt is used for light requirements.
The transparent sealant is mandatory for a contrast or full surface broadcasting e.g., with KÖSTER Color-Chips. It is applied after the KÖSTER CT 215 Universal Floor has completely cured, but not sooner than 24 hours.
The material is usually applied in one layer. When applying the KÖSTER Top Coat 1C Matte, two coats are mandatory. On smooth surfaces, the material is applied directly evenly over the surface with a KÖSTER Rubber Squeegee and then carefully back rolled in a crosswise motion with KÖSTER Resin roller.

In the case of surfaces broadcast with quartz sand or colored quartz, the consumption depends on the roughness of the surface, e.g. depending on the largest grain size of the broadcasted material from 0.5 – 0.8 kg/m².
If two layers are to be applied, the second layer must be applied within 24 hours of the first one. The second layer can then be used by adding KÖSTER Anti-Slip Granules 20 to achieve the required slip resistance. A maximum of 2 layers of an identical sealing material are built up. The use of different sealers is not recommended. We recommend wearing spiked shoes when applying the material. When applying KÖSTER TS Transparent, the room or ambient temperature must be during and for a min. of 4 hours after the installation at least +3 ° C above the dew point.

9.6 Different possibilities/system build-ups

After the substrate has been prepared as described above, the primer is applied using KÖSTER CT 215 Universal Floor. After mixing the A and B components, KÖSTER CT 215 Universal Floor is diluted with 10 – 25 % by weight of clean tap water and worked into the substrate using a KÖSTER Resin Roller. Ideally, less water should be added to highly absorbent and open-pored substrates. If possible, check the absorbency before starting work. To avoid material accumulation, the primed surface must be reworked immediately afterwards in a criss-cross pattern. Avoid the formation of puddles.
All steps are applied after the primer has been applied and cured.

9.6.1 Single sealing layer

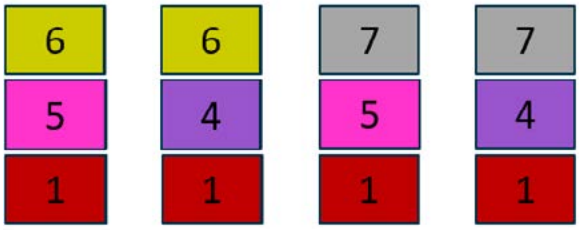
1. Leveling coat 1 - 2 mm, KÖSTER CT 215 Universal Floor 1:1 with KÖSTER Filler Fine + 5 wt.-% water; (2 kg mixed material = 1 mm/m² per layer thickness)
2. Sealing with KÖSTER CT 215 Universal Floor, approx. 200 - 300 g/m²
3. Sealing with KÖSTER CT 215 + 2 % by weight KÖSTER Anti-Slip Granulate 20, approx. 200 - 300 g/m²
4. Contrast scattering with KÖSTER Color-Chips, approx. 50 g/m²
5. Full surface scattering with KÖSTER Color-Chips, approx. 0.7 - 1.0 kg/m²
6. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, single layer, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, single layer, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, double layer 0.1 - 0.2 kg/m²
7. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, one coat, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, one coat, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, two coats, approx. 0.1 - 0.2 kg/m², BUT + 2 % by weight KÖSTER Anti-Slip Granulate 20 in second layer

9.6.2 Simple flowable coating

1. Leveling coat 1-2 mm, KÖSTER CT 215 1:1 with KÖSTER Filler Fine + 5 wt.-% water
   2 kg mixed material = 1 mm/m² per layer thickness
2. Sealing with KÖSTER CT 215, 200 - 300 g/m²
3. Sealing with KÖSTER CT 215 + 2 % by weight KÖSTER Anti-Slip Granulate 20, 200-300 g/m²
4. Contrast scattering with KÖSTER Color-Chips, approx. 50 g/m²
5. Full surface scattering with KÖSTER Color-Chips, 0.7-1.0 kg/m²
6. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, single layer, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, single layer, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, double layer 0.1-0.2 kg/m²
7. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, one coat, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, one coat, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, two coats, 0.1-0.2 kg/m², BUT + 2 % by weight KÖSTER Anti-Slip Granules 20 in second layer

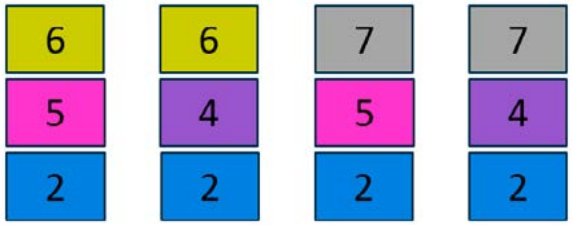
9.6.3 Simple flowable coating with Color-Chips

1. Leveling coat 1-2 mm, KÖSTER CT 215 Universal Floor 1:1 with KÖSTER Filler Fine + 5 wt.-% water
   2 kg mixed material = 1 mm/m² per layer thickness
2. Simple sealing with KÖSTER CT 215 Universal Floor, approx. 200 - 300 g/m²
3. Sealing with KÖSTER CT 215 Universal Floor + 2 % by weight KÖSTER Anti-Slip Granulate 20, approx. 200 - 300 g/m²
4. Contrast scattering with KÖSTER Color-Chips, approx. 50 g/m²
5. Full surface scattering with KÖSTER Color-Chips, approx. 0.7 - 1.0 kg/m²
6. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, single layer, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, single layer, approx. 0.1 kg/m²; KÖSTER Top Coat 1K Matte, double layer approx. 0.1 - 0.2 kg/m²
7. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, one coat, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, one coat, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, two coats, 0.1 - 0.2 kg/m², BUT + 2 % by weight KÖSTER Anti-Slip Granulate 20 in second layer



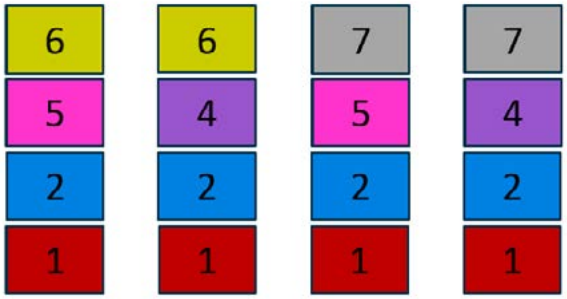
9.6.4 Simple sealing with Color-Chips

1. Leveling coat 1-2 mm, KÖSTER CT 215 1:1 with KÖSTER Filler Fine + 5 wt.-% water
   2 kg mixed material = 1 mm/m² per layer thickness
2. Simple sealing with KÖSTER CT 215 Universal Floor, approx. 200 - 300 g/m²
3. Sealing with KÖSTER CT 215 + 2 % by weight KÖSTER Anti-Slip Granulate 20, approx. 200 - 300 g/m²
4. Contrast scattering with KÖSTER Color-Chips, approx. 50 g/m²
5. Full surface scattering with KÖSTER Color-Chips, approx. 0.7 - 1.0 kg/m²
6. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, single layer, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, single layer, approx. 0.1 kg/m²; KÖSTER Top Coat 1K Matte, double layer approx. 0.1 - 0.2 kg/m²
7. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, one coat, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, one coat, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, two coats, 0.1-0.2 kg/m², BUT + 2 % by weight KÖSTER Anti-Slip Granulate 20 in second layer



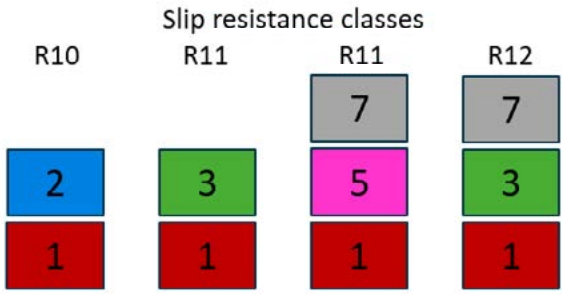
9.6.5 Flowable coating with Color-Chips

1. Leveling coat 1-2 mm, KÖSTER CT 215 Universal Floor 1:1 with KÖSTER Filler Fine + 5 wt.-% water
   2 kg mixed material = 1 mm/m² per layer thickness
2. Sealing with KÖSTER CT 215 Universal Floor, approx. 200 - 300 g/m²
3. Sealing with KÖSTER CT 215 Universal Floor + 2 % by weight KÖSTER Anti-Slip Granulate 20, approx. 200 - 300 g/m²
4. Contrast scattering with KÖSTER Color-Chips, approx. 50 g/m²
5. Full surface scattering with KÖSTER Color-Chips, approx. 0.7 - 1.0 kg/m²
6. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, single layer, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, single layer, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, double layer approx. 0.1 - 0.2 kg/m²
7. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, one coat, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, one coat, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, two coats, approx. 0.1 - 0.2 kg/m², BUT + 2 % by weight KÖSTER Anti-Slip Granulate 20 in second layer



9.6.6 build-up with slip resistance classes

1. Leveling coat 1-2 mm, KÖSTER CT 215 1:1 with KÖSTER Filler Fine + 5 wt.-% water
   2 kg mixed material = 1 mm/m² per layer thickness
2. Sealing with KÖSTER CT 215 Universal Floor, approx. 200 - 300 g/m²
3. Sealing with KÖSTER CT 215 Universal Floor + 2 % by weight KÖSTER Anti-Slip Granulate 20, approx. 200 - 300 g/m²
4. Contrast scattering with KÖSTER Color-Chips, approx. 50 g/m²
5. Full surface scattering with KÖSTER Color-Chips, approx. 0.7 - 1.0 kg/m²
6. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, single layer, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, single layer, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, double layer 0.1-0.2 kg/m²
7. Transparent sealer, (glossy or matt), with KÖSTER TS transparent, glossy, one coat, approx. 0.1 kg/m²; KÖSTER CT 327 1C Sealer, glossy, one coat, approx. 0.1 kg/m²; KÖSTER Top Coat 1C Matte, two coats, approx. 0.1 - 0.2 kg/m², BUT + 2 % by weight KÖSTER Anti-Slip Granulate 20 in second layer



9.6.7 General overview of different build-ups

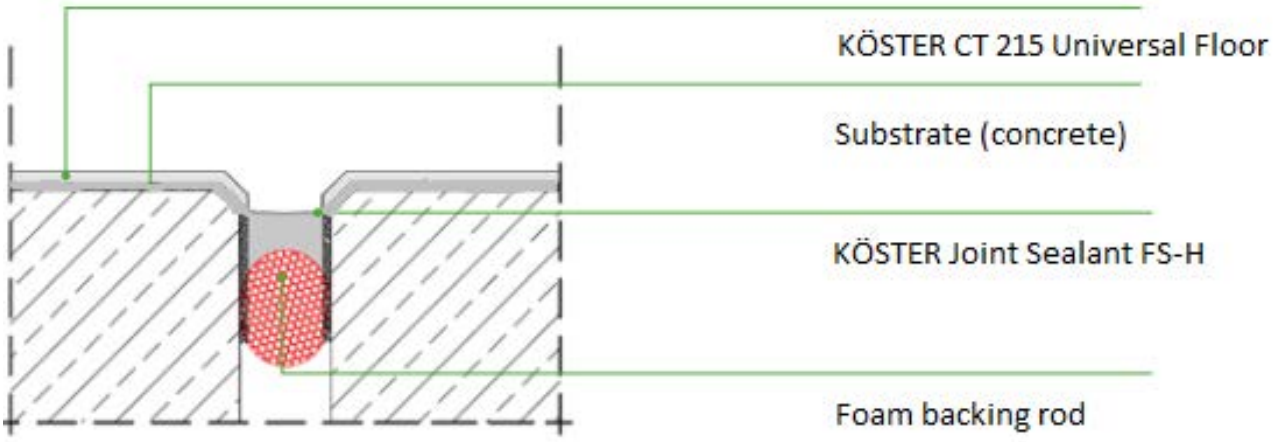
1. Leveling coating KÖSTER CT 215 with KÖSTER Filler Fine + Water
2. Simple sealing with KÖSTER CT 215 Universal Floor
3. Sealing with KÖSTER CT 215 Universal Floor + KÖSTER Anti-Slip Granulate 20
4. Contrast scattering with KÖSTER Color-Chips
5. Full surface scattering with KÖSTER Color-Chips
6. Transparent sealer (glossy or matt; single or double layer)
7. Transparent sealer (as 6.) + KÖSTER Anti-Slip Granulate 20

In addition to these 24 basic variants, the basic colors, the layer thicknesses, and the different colored chips in and full scattering as well as their combinations, the four sealing variants with and without anti-slip granulate.

9.7. Surface details

9.7.1 Expansion joints

Expansion joints must be filled with a material that can elastically absorb the movements of the subsurface. Expansion joints must be sealed so that they are durable, dimensionally stable and UV-resistant. A joint sealant must allow movements in the component without causing damage to the structure. Movement joints of up to 35 mm can be sealed with KÖSTER Joint Sealant FS-H (or KÖSTER Joint Sealant FS-V). KÖSTER Joint Sealant FS-H is a self-leveling, rubber-elastic sealing compound with a high chemical resistance.



10 Quality control and inspection

Quality control and inspection are paramount in the application of floor coatings as they ensure that the finished surface meets the desired standards of appearance, durability, and functionality. By conducting thorough quality control and inspection procedures throughout the coating process, any defects or inconsistencies can be identified and addressed promptly, preventing costly rework or repairs later on. This includes monitoring the thickness and coverage of the coating, checking for proper adhesion to the substrate, assessing the uniformity of the finish, and evaluating resistance to chemicals, abrasion, and other environmental factors. Through meticulous quality control and inspection, the integrity and performance of the floor coating can be upheld, ultimately prolonging its lifespan and enhancing the overall safety and aesthetics of the space.

11 Cleaning and maintenance

KÖSTER BAUCHEMIE AG's coating systems find application in diverse environments, subject to a range of stresses, including mechanical, thermal, and chemical factors, often in combination. Notably, persistent dirt accumulation, characterized by a high abrasive potential, poses a considerable risk to coating durability. Thus, the proactive implementation of maintenance and regular cleaning measures is imperative, not only for prolonging the life of reactive resin coatings but also to preserve their aesthetic appeal.

Cleaning during operation is categorized into two types: maintenance cleaning and intensive or basic cleaning.

- **Maintenance cleaning:** This routine involves daily or weekly cleaning using professional cleaning agents to swiftly eliminate new dirt and preserve the visual appeal of the surfaces. If it's anticipated that cleaning intervals will not suffice to prevent new dirt accumulation, adjustments to the cleaning frequency may be necessary. Swift removal of loose or adhering dirt is crucial to prevent it from becoming ingrained into the coating. Ideally, machine-based cleaning equipment should be used for uniform wet cleaning, especially on larger surfaces.

- **Intensive or basic cleaning**: This form of cleaning, carried out annually or semi-annually, is vital for the permanent removal of cleaning agent residues, and dirt deposits. It's crucial to emphasize that friction-based cleaning methods should be employed to prevent coating damage. This process typically involves the removal of initial or basic care to establish a proper foundation.

The use of specialized professional cleaners and appropriate accessories is strongly recommended. Following intensive or basic cleaning, the initial or basic care should be reapplied to protect cleaned surfaces from future soiling.

Special Coating Considerations:

- **Slip-Resistant Coatings:** Anti-slip coatings are prone to significant dirt buildup. Effective cleaning involves brush cleaning, with rubbing or abrasive methods unsuitable.
- **Special Soiling:** Specific issues such as abrasion, discoloration, or damage from sparks, fire, or rust necessitate tailored solutions and may require preventive measures, like protective mats.

Note:
The guidance provided for cleaning and maintaining reaction resin coatings is of a general nature and is rooted in our extensive experience. Due to the wide array of substrates, coatings systems, and design variations, it is impractical to offer universal recommendations for various cleaners, types, or methods. Therefore, we strongly recommend conducting preliminary tests for optimal cleaning outcomes for specific applications.

12 Consumption rates

Depending on the application of the
KÖSTER CT 215 Universal Floor

- As a primer: approx. 0.2 – 0.3 kg/m²
- As a leveling coating: approx. 1 kg/m² per mm layer thickness plus KÖSTER Filler Fine approx. 1 kg/m² per mm layer thickness; ratio (1:1)
- As a coating/sealant: approx. 0.2 – 0.3 kg/m²

KÖSTER Filler Fine (if required)
Approx. 1.0 kg per 1.0 kg KÖSTER CT 215 Universal Floor

KÖSTER Color Chips

- Contrast dispersion: from 50 g/m² (depending on coverage)
- Full surface broadcasting: approx. 0.7 – 1.0 kg/m²

KÖSTER Anti-Slip Granulate 20
Approx. 2 % by weight based on the amount of material of the KÖSTER CT 215 Universal Floor

KÖSTER CT 327 1C Sealer
Approx. 0.1 kg/m² per layer

KÖSTER Top Coat 1C Matte (2 coats required)
Approx. 0.1 - 0.2 kg/m² per layer

KÖSTER TS transparent
Approx. 0.1 – 0.2 kg/m² per layer

13 General notes

13.1 Material storage

Store cool, but frost-free in closed containers. The material can be stored at temperatures between +5 °C and +25 °C.

Storage time:

KÖSTER CT 215 Universal Floor	min. 12 months
KÖSTER Filler Fine	min. 2 years
KÖSTER Color Chips	min 2 years
KÖSTER Anti-Slip Granulate 20	min 2 years
KÖSTER TS Transparent	min 12 months
KÖSTER Top Coat 1C Matte	min 12 months
KÖSTER CT 327 1C Sealer	min 6 months

13.2 Packaging

KÖSTER CT 215 Universal Floor can be ordered in a wide variety of RAL colors. Ask your consultant for specific colors and delivery times.

Typical colors in stock:

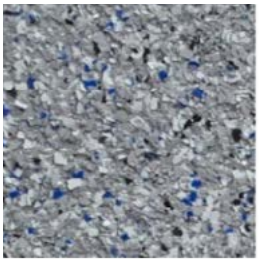
KÖSTER CT 215
Universal Floor
approx. RAL7035 light grey
- CT 215 003
  approx. RAL7035 3 kg
- CT 215 010
  approx. RAL7035 10 kg

KÖSTER CT 215
Universal Floor
approx. RAL7030 stone grey
- CT 215 003
  approx. RAL7030 3 kg
- CT 215 010
  approx. RAL7030 10 kg

KÖSTER CT 215
Universal Floor
approx. RAL7032 pebble grey
- CT 215 003
  approx. RAL7032 3 kg
- CT 215 010
  approx. RAL7032 10 kg

KÖSTER Color-Chips
White, light grey, grey
5 kg (CT429 001)

KÖSTER Color-Chips
Black, grey
5 kg (CT 429 002)



KÖSTER Color-Chips
Black, grey, blue
5 kg (CT 429 003)

KÖSTER Color-Chips
White, beige, brown
5 kg (CT 429 004)

Other colors also available upon request

KÖSTER Filler Fine
20 kg bag
(CT 710 020)

KÖSTER Anti-Slip
Granulate 20
200 g
(CT 411 200)

KÖSTER CT 327
1C Sealer
5 kg bucket
(CT 327 005)

KÖSTER Top Coat
1C Matte
5 kg bucket
(CT 325 005)

KÖSTER
TS Transparent
- 1 kg combipack-
  age (CT 320 001)
- 6 kg combipack-
  age (CT 320 006)

13.3 Important considerations

- KÖSTER CT 215 Universal Floor can be used as the sole coating
- It can be used with or without KÖSTER Color Chips
- It can be used with or without sealant
- It can be used as a flowable coating in up to 2.00 mm layer thickness with the KÖSTER Filler Fine

13.4 Limitations

- Observe statutory accident prevention regulations. KÖSTER TS transparent and KÖSTER CT 327 1C Sealer contain diisocyanate. For the use of this product is acc. EU chemicals legislation (REACH), Regulation 1907/2006, Annex XVII from August 24, 2023 a training for commercial and industrial users on the safe use of diisocyanates is mandatory. Training documents can be found at https://safeusediisocyanates.eu/ Work clothing covering arms and legs or a protective suit must be worn. Hoods must be worn when working in confined spaces or in the "overhead area". Suitable Wear suitable protective gloves (e.g., nitrile gloves) and safety goggles.
- Liquid plastics react to temperature fluctuations with changes in viscosity and hardening. Low temperatures slow down, high temperatures and larger accumulations of material accelerate the reaction time.

14 Certifications

- **AgBB-Testing certificate Nr. L 2400 FM, 10.9.2020, Product fulfills requirements of category A**
- **Test according to EN 1504-2: ZA. 1f "Physical Resilience (5.1), July 2020**
- **Test according to EN 13813: SR - b 2.0 AR 0.5 -IR 4 "Synthetic resin screed mortar for indoor use", July 2020**
- **Various individual test certificates for the anti-slip properties according to DIN 51130 and DGUV rule 108-003, MPI Adendorf, July 2020, depending on the structure R10, R11 and R12**
- **Water vapor permeability to determine the sD values i. P.**

15 Chemical resistance

	No change in the mechanical properties. (Discoloration was not taken into account when examining long-term contact, +20 °C, 50 % rH)	
Chemical	Long time contact (> 2 h)	Short term contact
Acetone*	+	+
Aromatic Ketone acc. To DIBt-test groups	+	+
Gasoline (Super ES) *	+	+
Diesel *	+	+
Acetic acid, 3 %	-	+
Acetic acid, 5 %	-	+
Acetic acid*, 100 %	-	+
Citric acid	+	+
Ethylene glycol *	+	+
Formic acid, 2.5 %	-	+
Sodium Laurel sulfate, 15 %	+	+
Potassium Hydroxide, 10 %	+	+
Lactic acid, 5 %	-	+
Lactic acid, 10 %	-	+
Olive oil	+	+
oleic acid, 100 %	+	+
Oleic Acid, 30 %	-	+
Sodium chloride	+	+
Potassium chloride	+	+
Calcium chloride	+	+
Sulfuric acid, 1%	+	+
Sulfuric acid, 10%	-	+
Sulfuric acid, 20%	-	+
Sugar	+	+
Tartaric acid, 10%	+	+
Toluene	+	+
Xylene	+	+
Coca-Cola	+	+
Coffee	+	+

* When sealing containers electrostatic charges must be avoided.
This table gives typical results from laboratory experiments under standard conditions. The results serve as an orientation for the planner. Combinations of chemicals in this table may cause different results and require separate advice. This table is valid until June 1st, 2025, or until the publication of a new technical data sheet.

16 Legal disclaimer

This method statement reflects general cases with standard parameters. It is not suitable as a step-by-step guide for all and each waterproofing project as the conditions on site at the moment of the application cannot be foreseen. It is solely the applicator's responsibility to decide on the actual procedure considering the specific situation on the construction site. In any case, KÖSTER's Terms of business are valid and can be viewed under www.koester.eu