

General processing guidelines for CONICA coating systems, CONICA waterproofing systems and CONICA car park deck coating systems

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1 Introduction

CONICA coatings and surface protection systems are based on the many years of experience of CONICA AG and have been used successfully in many countries. As a rule, the products consist of one, two or more components. The application is carried out under a variety of processing and environmental conditions. With the following general processing instructions, we would like to give an overview of the important points for the preparation and testing of the substrates as well as the processing of the CONICA synthetic resins.

2 Subsoil preparing / subsoils

a) Cementitious screeds and concrete surfaces (CT/C)

For the coating of cementitious surfaces, the [screed and concrete qualities](#) must comply with the following [minimum qualities](#). These include decorative and industrial floor coatings as well as car park deck coating systems and waterproofing membranes. The substrates must meet the requirements of [DIN 1045 and DIN EN 1992-1-1 \(Euro Code 2: Design and construction of reinforced concrete and prestressed concrete structures - Part 1-1: General rules and rules for building construction\)](#) or DIN 18560 screeds in construction as well as to [EN 13813](#) screed mortar, screed, and screed.

The minimum requirements are to be selected according to the following requirements:

For [light load](#) [min. CT-C30 or C20 to C25](#),

for [medium to heavy load at least](#) [min. CT-C40 or C30/37 to C35/45](#).

The surfaces to be coated has to [be prepared in accordance with the generally accepted rules of technology accord. EN 1504-10, ZTV-ING, DIN V 18026](#) with reference to the repair guidelines (Rili SIB 2001) [or SIA 252 and SIA 271](#). That is, the substrates must be dry, firm, stable, fine rough and free from cement laitance, dust, grease, rubber debris and other adhesion-reducing substances.

Industrial floors or parking and traffic areas contaminated by chemicals, oils, solvents, and de-icing salts require special treatment, as otherwise damage such as osmotic blisters cannot be ruled out.

The tensile [bond strength after substrate preparation must average \$\geq 1.5 \text{ N / mm}^2\$](#) .

For parking deck coatings according to test group OS 8 and water protection coatings according to § 62 Water Resources Act (WHG), which have a total layer thickness $> 1.5 \text{ mm}$, the tensile bond strength must be $\geq 2.0 \text{ N / mm}^2$.

For [light loads values \$\geq 1.0 \text{ N / mm}^2\$ are sufficient in individual cases](#) (please ask our technical service).

The test is carried out with a tensile tester of class 2 acc. EN 10002-24. The tensile speed for hard coatings is 100 N/s; for elastic and soft coatings at 200 N/s.

When laying CONICA coatings on cementitious substrates, the [residual moisture content](#) of the substrate in the upper zone must [not exceed 4% \(CM\)](#) (measurement with CM device). [Special rules applicable to heated screeds and heating concretes](#). These substrates must be "heated to dry" in advance. [For diffusion-tight coverings](#), the recommendations [on heated substrates](#) are for residual moisture $\leq 1.8\%$ (CM). [Separate measures must be taken for higher residual moisture contents and substrates with rising moisture](#), e.g., by using additional moisture tolerant barrier primers. (Please also note our [general information on barrier primers](#)).

For the [preparation of the subsoils, suitable methods](#) are for e.g., shot blasting, milling with appropriate after treatment or diamond grinding. For light mechanical loads grinding with a sanding paper is sufficient. After treatment, the surfaces should be vacuumed with a powerful industrial vacuum cleaner.

High-strength substrates (e.g., vacuum concrete) and hardened surfaces generally require special substrate preparation and may require the use of special CONICA primers (please ask our Technical Service).

b) Green / young concrete

Green or young concrete can be coated under special conditions with special CONICA products. (Please ask our technical service).

c) Magnesia screed (MA)

Magnesite or magnesia screeds usually have very good mechanical strengths. These screed types are therefore usually found in the industry. The quality of the screed should meet the following requirements:

For [light load](#) [min. MA-C30](#)

For [medium to heavy load](#) [min. MA-C40](#).

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The surfaces must be dry, strong, stable, fine rough and free from dust, grease, rubber abrasion and other adhesion-inhibiting substances. Any existing enrichments of magnesium chloride on the surface of magnesia screeds must be completely removed. Magnesia screeds [are partially waxed](#) after completion and during ongoing maintenance. [This waxed layer must be removed](#) completely. If necessary, this is done by "acidification" with dilute citric acid. In case of doubt, test areas have to be created in advance.

We recommend gentle shot blasting (not open-pored) as a mechanical substrate preparation. [Excessive shot blasting can damage the surface texture.](#)

The tensile bond strength after surface preparation must average $\geq 1.5 \text{ N / mm}^2$. For light loads, values $\geq 1.0 \text{ N / mm}^2$ may be sufficient (please ask our Technical Service).

Magnesia screeds are usually [sensitive to permanent wetness](#) and thus lose their strength. Therefore, it must be ensured that they are [protected from rising moisture](#) from the subsoil or that a [water vapour diffusion-capable coating system](#) must be applied.

Before application of the coating, the [specific household humidity's](#) must be achieved which can be between 4% - 8% (measurement with CM device) and above for magnesia screeds. [Execution and evaluation of a test area are recommended. Beware of older magnesite screeds that may contain wood.](#)

This species is also referred to as "stone wood screed" and needs to be considered in detail because they have a higher sensitivity to moisture, we usually recommend the removal. Furthermore, there are [old magnesia screeds with asbestos](#) shares that cannot be treated without special training. For older magnesite screeds, we recommend the consultation of a qualified expert.

d) Calcium sulphate- / Calcium sulphate flow screeds (CA/CAF) (old Anhydrite screeds)

Calcium sulphate and calcium sulphate self-levelling screeds are mainly used in residential and commercial construction for office space as well as for public buildings such as hospitals, schools, and administrative buildings. Due to the special properties, the screed grades are to be particularly observed and should meet the following minimum requirements:

For [light load](#) [min. CA-C30](#),
for [medium weight](#) [min. CA-C40](#).

The surfaces must be dry, strong, stable, fine rough and free from dust, grease, rubber abrasion and other adhesion-inhibiting substances. Above all, calcium sulphate screeds have an increased proportion of very fine aggregates on the surface.

As a substrate preparation, [sanding and intensive vacuuming](#) of the surfaces is recommended. [Shot blasting can damage the surface](#) and is therefore [not recommended](#).

After substrate preparation, the average tensile strength should be $\geq 1.5 \text{ N / mm}^2$. For light loads, values $\geq 1.0 \text{ N / mm}^2$ may be sufficient (please ask our Technical Service).

Calcium sulphate screeds [lose their strength with a long-lasting and strong wet load](#). For this reason, it must be ensured that they are protected from rising water and other wetness. When [laying water-vapour-impermeable coatings, natural anhydrite screeds should be given special consideration](#). Due to the sensitivity to moisture no water-based coatings may be used, the installation of test areas is urgently recommended, [if there are doubts or the results are unsatisfactory, it is not recommended to use a coating.](#)

Before applying the coating, the [specific residual moisture content must be set, which are \$\leq 0.5\%\$ for CA and CAF](#). (Measurement with CM device). Some manufacturers of CA and CAF screeds release coatings with a residual moisture content of $\leq 1.0\%$, [in this case we recommend requesting manufacturer approval](#). When coating planned on screeds based on calcium sulphate and anhydrite binders with floor heating, the residual moisture specified by the manufacturer and the generally applicable guidelines and standards must be observed. As a rule, and according to DIN 18560 these are included $\leq 0.5\%$ (measurement with CM device). Some manufacturers of CA and CAF screeds continue to demand $\leq 0.3\%$ (measurement with CM device), in individual cases the information in the respective technical data sheets of screed manufacturers must be considered or In these cases. [We recommend obtaining the approvals from the screed manufacturer. Depending on the thickness of the CA and CAF screeds](#) and, above all, on the prevailing climatic conditions, the required values can only be achieved with the help of drying equipment.

e) Bituminous screeds (AS) (indoor, for industrial and decorative floors)

Bitumen bound substrates such as e.g., [hard cast asphalt](#) or old cold bituminous screed (e.g., Latexfalt) can be [coated with suitable coating systems \(usually polyurethane resin coatings\)](#) for [industrial applications or interior decorative applications](#). The load-bearing capacity and strength of the substrate are decisive for the mechanical properties of the overall system.

Cold bitumen screeds should not be coated in the new state (< 1 year) because here in the use still a subsequent compaction takes place.

Due to the thermoplastic properties of asphalt screeds, minimum requirements for the substrate quality are important; the properties are [according to EN 13813](#) as follows:

For [light loads](#) [min. AS-IC15](#),
for [moderate load](#) [min. AS-IC10](#).

for heavy loads must, if necessary, additional measures are taken.

[Substrate preparation](#) is usually carried out by means of shot blasting or milling followed by diamond grinding, sometimes directly by diamond grinding. It is important that after the surface pre-treatment [the aggregate or support grain contained must superficially exposed to at least 60-70%](#) at which a sufficient connection of the following coating to the substrate take place. Surface unevenness, cavities or cracks on the surface must be prepared by special measures. For newly laid mastic asphalt screeds, the fresh surfaces can be sprinkled on with oven-dried quartz sand with a coarse QS grain, e.g., QS 0.6 - 1.2 mm and, if necessary rubbed in. In this case, an "exposure" of the support aggregate grain can be dispensed with. The preparation is in this case done by sanding and intensive vacuum cleaning.

As a rule, the adhesive [tensile strengths of asphalt screeds are below 1.5 N / mm²](#). For light loads, values $\geq 1.0 \text{ N / mm}^2$ may be sufficient. [If there are doubts](#) about the suitability of the substrate, it is recommended to [create test areas](#) to assess the load capacity of the entire system built-up (if necessary, contact our Technical Service).

f) Steel / Stainless steel / Non-ferrous metal / aluminium

The preparation of steel takes place over the entire surface in accordance with DIN EN ISO 12944-4 (2018) up to preparation grade Sa 2 1/2 (blasting) or

in cramped conditions also up to St 3 (preparation with hand tools or mechanically driven tools).

For smaller adhesive surfaces, the steel is prepared by grinding. For stainless steel and non-ferrous metals, a surface preparation by light sanding and a grease and oil-free cleaning applies. [The use of suitable priming primers is recommended.](#)

g) Wood and wood panels

In general, wood substrates can be coated with synthetic resin coatings. The preparation is carried out by grinding and intensive vacuuming. [As a rule, after the first primer, wood fibres appear, and it is recommended to remove the wood fibres by applying a light sanding before applying the coating to apply a second primer.](#) As a rule, the adhesive tensile strengths of wooden substrates are below 1.5 N / mm^2 . For light loads, values 1.0 N / mm^2 may be sufficient.

Before applying the coating, [the specific residual moisture content must be set](#), which for wooden substrates indoors (floors and parquet) is between 4% - 12% (measurement with a wood moisture meter). With different moisture conditions (air humidity), wood also changes its dimensions through swelling and shrinking.

[For wooden substrates, it must be ensured that they are firmly screwed and fixed; the joints must be levelled off in advance and, if necessary, filled. If necessary, incorporate a fabric tape over the joints and bumps.](#) If there is any doubt about the suitability of the substrate, it is recommended to create test areas to assess the load-bearing capacity of the entire structure.

[Polyurethane resin coatings are better suited](#) due to their static crack-bridging properties (consult our technical service if necessary).

h) Other subsoils

For other unnamed surfaces, we ask for consultation with our Technical Service.

3 Climatic conditions

For the processing of one, two or more components reaction resins, the ambient and object temperatures as well as the relative humidity have a significant influence on the quality of the products.

a) Influence of temperatures:

Low ambient, object and material temperatures delay the reactions and hardening of the synthetic resins, and the viscosity increases, which usually leads to higher material consumption on the surface. At the same time, the flow and deaerating properties are adversely affected negative.

High temperatures, on the other hand, accelerate the reaction times and the curing and significantly reduce the material viscosity. This can lead to problems on sloping surfaces.

For synthetic reaction resins, which have not been specifically formulated, all processing values and processing times, which are listed in the product data sheet, are determined at 23 ° C and 50% relative humidity. For other temperatures, the "rule of thumb" as following is valid:

Temperature increases by **+ 10 ° C** to 30 ° C

- halving hardening,
- halving processing time
- lowering viscosity (= more liquid)

Lowering the temperature by **- 10 ° C** to 10 ° C

- doubling cure time,
- doubling processing time
- increase viscosity (= higher viscous)

Priming, coating, and sealing work may only be carried out at constant or falling temperatures, since there is a risk of blistering due to warming air in the underground pores, especially in the case of primers, scratch coats and levelling coatings, but also other coatings. Even with granulate mats (SBR) with a pore volume that is covered with a pore spatula or on layers scattered with quartz sand (e.g., parking deck coatings) with a top coat, there is a risk of blistering. This can also lead to problems indoors in the area of window and door areas (solar radiation). Floor and surface heating must be switched off or throttled 24 hours before carrying out the coating work.

Furthermore, in particular underfloor heating should remain switched off 48 hours after the application of the coating or operated only throttled to avoid blistering.

The processing and especially surface temperature must be at least 3 K (= 3°C) above the existing dew point temperature when processing the reaction resins (see CONICA dew point table) so that the risk of condensate formation on the surfaces to be coated can be ruled out. When this limit (dew point) is reached, the work must be stopped immediately.

Please consider that the surface temperatures are usually lower than the room or ambient temperatures.

When processing aqueous systems, it must be borne in mind that water evaporation can increase the humidity and thus cause a change in the dew point temperature.

After application, the materials shall continue to be protected from moisture over the period specified in the technical data sheets. If previously exposed to moisture damages such as whitening (carbamate formation in epoxy resins), stickiness, blistering or foaming (polyurethane resins) may occur on the surfaces. Already damaged surfaces should be mechanically removed and rebuilt if necessary

In order to achieve optimum surfaces and the material and system properties described in the technical data sheets, it is recommended to carry out the work in a temperature range between + 15 ° C and + 25 ° C for the ambient and underground temperatures. For lower temperatures, specially formulated products or accelerators are available.

b) Influence of air humidity:

1-component polyurethane and many 2-component Polyaspartic resins cure under the influence of atmospheric moisture. Low humidity's increase curing and rework ability times. High humidity's shorten the time of curing and rework ability. Ideally, the humidity is between 40% and 80%.

Under no circumstances may wet sand and other fillers and aggregates be co-processed, as otherwise damage to the coating materials may occur and the processing is shortened so much that the installation of even coatings is hardly possible.

For 2-component polyurethane resin products, the humidity should not exceed 75%, otherwise side reactions and in the worst case, bubbles or foaming may occur.

For epoxy resins, humidity ranges of 80% or less are recommended.

When using aqueous coating and sealing products, attention must be paid to a change in air humidity due to evaporation. Ensure good ventilation without drafts.

Humidity should not exceed 85% during processing and curing time to ensure sufficiently rapid evaporation of the water. It is important to ensure that connections do not dry up, as they will otherwise be visible as roller marks.

In general, we recommend the [continuous monitoring or 3 times \(before starting, during application, by ending of application\)](#) and [documentation of the humidity, the temperature, and the dew point](#) for all construction projects. [For coatings accord. to EN 1504-2 it is mandatory.](#)

The product-specific processing data such as temperatures, humidity's and processing times can be found in the respective technical product data sheets.

4 Influence cause by weathering and UV radiation

When using CONICA coatings and sealing lacquers, the effects of weathering and / or [UV irradiation](#) must be considered when choosing the product. There may be [changes in the colour](#) of the coating systems, which generally have no negative influence on the functionality of the coating systems. This is especially true for epoxy resins and [aromatic polyurethane resins](#), [with aromatic polyurethane and polyuria resins care must be taken](#) that they are not exposed too long without protection depending on the product and application.

Special [aliphatic polyurethane resin coatings and sealing lacquers](#) have [very high UV and hue resistance](#) and can greatly [reduce or avoid](#) the colour changes.

5 Resistance to discoloration and/or chemicals

Coatings and sealing lacquers in everyday use are subject to various influences such as chemical stress, mechanical stress by driving with different vehicles and transport vehicles but also other mechanical influences. This results in changes in the surfaces such as discoloration, abrasion and, in the worst case, damage to the surfaces.

[Discolouration](#) on coated and sealed surfaces can have various causes. Rubber (e.g., dark, and black rubber, but also light rubbers) and [plasticized plastics](#) which have longer contact with the surfaces or additional influences as e.g., heat (underfloor heating, solar radiation) and humidity are [subject to discoloration, which cannot be removed](#). These include e.g., car, motor bikes, bicycles and forklift tires, machine feet or rubber mats. [To avoid such discolouration due to plasticizer migrations](#), suitable polyurethane tires (Vulkollan) or mats may be used.

Furthermore, discoloration due to rubber and tire wear, which occurs on frequented surfaces, can usually be removed by means of special cleaning agents.

On the other hand, burn marks which can be caused due to spinning forklift and drive wheels or burn marks caused by flying sparks, e.g., in metalworking workshops or by cigarette embers, cannot be removed completely.

[Further discoloration](#) can be [caused by artificial or natural dyes](#) in foods and beverages (e.g., coffee, red wine, cola, curry powder and sauces, paprika, etc.), hair dye and bleach, but also by [overly concentrated disinfectants and cleansers](#).

If necessary, we recommend applying a particularly chemical-resistant coating or sealing lacquers. However, depending on the exposure time, exposure concentration and the chemical applied, discoloration and changes in the degree of gloss cannot be ruled out.

[On weathered surfaces discoloration by foliage, the dyes, tannins, mosses](#), and other chemical influences contained therein are possible, which cannot always be completely removed, especially if they are not immediately removed. If necessary, we recommend carrying out preliminary tests on samples or sample surfaces.

6 Preparation of materials

All CONIFLOOR, CONIPROOF and CONIPAVE materials are delivered in coordinated work packages. The resin and hardener components are matched and filled in the appropriate mixing ratio.

For individual products, larger container units (e.g., barrels or IBC containers) are available, for which the mixing ratio is only partially or not specifically matched to one another.

[For partial withdrawals, a suitable construction site scale \(recommendation up to at least 30 kg and in at least 10-20 g steps\)](#) must be used. For very small quantities, such as Accelerator, thixotropic agent it is recommended to use laboratory scales or in case of emergency also digital kitchen scales.

[The withdrawal of partial quantities from the containers by means of volume measurement or meter rods usually leads to mixing errors.](#)

Many [coating and sealer materials are either filled and / or pigmented.](#)

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In this case, the individual components (mostly part A) must be thoroughly stirred up before partial withdrawals or even before being mixed (2-component) and subsequently processed.

The same applies to 1-component products. Large units such as barrels and containers must be stirred with a suitable drum stirrer before and during processing until the fillers and pigments are homogeneously mixed.

For 2-component materials we recommend using a slow running stirrer (e.g., stirrer up to 300 U/m, compulsory mixer or similar). Filled and / or pigmented coating materials are mixed for at least 3 minutes, poured to another fresh mixing pail then briefly again mixed for about 1 minute.

Further details on these mixing processes, mixing times and processing can be found in the individual technical data sheets.

Different mixing times can lead to colour differences and shades on the surface, too short mixing times or processing from the original container can lead to mixing errors.

The temperatures of both components should ideally be at least 15 ° C when mixed and should be as equal as possible. For deliveries to the project (especially for longer freight periods) should be scheduled in time, so that the pre-tempering can take place on the project. Large containers such as barrels require a longer time for this.

Especially in the cold season, this is advantageous for processing. In the warm season storage e.g., on open spaces with direct sunlight should be avoided. Especially due to extreme temperature changes from day to night temperatures, there is the danger that the resulting "pumping effect" (expansion of the plastic, sheet metal containers and barrels by heating and then contraction during cooling) moist air gets into the container and water in the container enriched by condensation. Incorrect storage and transport can damage the liquid components.

Aqueous products and some B components of polyurethane resins are sensitive to frost and must be transported and stored accordingly.

Broadcasting quartz sand and granules as well as fillers such as quartz sands, quartz flours and others must be oven- or fire-dried.

Using wet fillers and quartz sands results in damage to the processing of liquid plastics, which alter the assured product and system properties.

Depending on their quality and their own colour, fillers can change the colour of the used materials. In general, care must be taken that the same amount of filler is always added and that the same mixing times are maintained. Otherwise, visible colour differences from mixture to mixture cannot be excluded.

7 Processing

CONIFLOOR, CONIPROOF and CONIPAVE products are applied after the mixing process according to the specifications in the technical product data sheets or system data sheets by means of toothed trowels and spatulas, surface squeegee, paint roller, trowel, or spray equipment.

Primers, impregnations and sealing lacquers are usually poured onto the surface and applied by means of a rubber squeegee or a metal rake.

Depending on consumption and surface roughness, different degrees of hardness are available. If necessary, these must be adapted on site.

For a better distribution and wetting of the subsoil roll with a short pile roller in different directions (crosswise) to prevent puddles and missing parts.

Depending on which product or system follows on the primer, normally oven dried quartz sand is sprinkled into the fresh surface to increase the adhesion to subsequent layers.

If the recoating intervals are adhered during the application, the broadcasting of quartz sand can be dispensed in individual cases and depending on the system structure. Then the recoating times of the primer resin specified in the respective technical data sheet must be strictly adhered to and the application must be checked in the system data sheet.

With dissipative and conductive systems, the broadcasting with quartz sand of the primer is generally dispensed. Here it is important that the recoating times be adhered to. At high mechanical loads, e.g., this is mandatory for pallet truck and forklift truck traffic or for system applications in which sand broadcasting of the primer is required (e.g., parking deck coatings).

Levelling coatings, litter layers and self-levelling coatings are applied using a toothed rubber squeegee, toothed trowel, or smoothing trowel and evenly distributed. The system-specific layer thicknesses are achieved via the different tooth heights used.

Notched metal blades and rubber squeegees must be regularly replaced with new tools for larger areas, in order to maintain the consumption values.

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We generally recommend using "pointed" triangular teeth for metal and rubber teeth.

The appearance of the surfaces is improved by [rerolling with spike roller](#) (recommended steel spike roller) but is [not mandatory](#) for each product. We recommend for better deaerating and to improve the self-levelling properties using a spike roller, at least the spike roller should be kept on hold on the job site. [For some systems, e.g., conductive coatings, it is technically mandatory](#) (see technical data sheets).

Colour matching

During the production of two [different batches](#) of the same product, visible [colour differences](#) can arise due to manufacturing reasons, e.g., due to raw material fluctuations.

[If several batches of a product are to be used in one construction project](#), batch-specific processing must take place [on the object](#).

Typically, when producing larger quantities delivered to an object, batch adjustment is made at the factory.

For deliveries that are made from the warehouse or for large projects that take place in different construction phases, [we ask you to pay attention](#) to separate [processing of the batches](#). If a [re-order](#) is required for a later construction phase, we ask you to inform us of a batch [adjustment](#), [if available, stating the previously delivered batch](#).

[When processing different batches separately on the same object, several containers must be divided and mixed together at the transition to the next batch](#), so that a smooth transition can be produced. Alternatively, a deliberate working seam (day section) or dividing rail can be planned at the transition.

For products that are reworked with a pigmented sealant, colour matching is not so important.

Please also note our [«additional information on colours and surfaces»](#) where you will find further information on colours and surfaces.

[Synthetic resin mortars](#) are laid by means of surface squeegee, levelling rails, screed box, etc. as an installation aid and then compacted and homogenized manually or mechanically by means of wing or Tellerglättern. Care must be taken to mix only as much material as can be processed within the reaction time with the available staff.

a) Consumptions

The [recommended and partially tested material consumption values](#) are usually defined in the system data sheets or in the technical product data sheets.

Information on consumption values in our system and product data sheets is based on defined processing conditions at an ambient and object temperature of 23 ° C and a relative humidity of 53%. Higher or lower temperatures affect the material viscosity and thus the material consumption. [The actual consumption is to be determined and checked on the object](#). The information on consumption values in test certificates also shows the required minimum consumption for the fulfilment of the tested parameters and may deviate from the named values depending on the following parameters:

- Underground roughness
- Substrate porosity and absorbency
- Underground, ambient, and material temperature
- Rheology of the reaction resins used
- grading curves and granules sizes and filler addition rates of the fillers used

The [technical product and system data sheets generally specify consumption margins](#). Here, the lower consumption value indicates the minimum consumption and refers to an optimally flat, only absorbent surface, the higher consumption value refers to a rough, porous surface. Experience shows that the actual consumption value is in the middle of the specified consumption range. Furthermore, the consumption value, unless otherwise stated, always refers to the filled material mixture (binder + quartz sand). Primers are usually processed unfilled.

b) Roughness

The details in our system and product data sheets do not include consumption data for [roughness surcharges](#). Existing substrate roughness (determination by means of sand surface method according to "Kaufmann") may have to be [compensated with an additional scratch coat or corresponding additional material consumption](#) as layer thickness surcharges.

Please note the relevant regulations! (e.g., RILI SIB 2001/2016, ZTV-ING or EN 1504-1) and ask for our [information for sand surface method according to "Kaufmann"](#).

c) Cracks

Usually after the surface preparation and the cleaning and vacuum cleaning of the surfaces, the existing cracks in the ground are visible. In this case, the **crack width must be determined** with a crack width meter and logged. **Whether cracks are subject to thermal or load-dependent movements must be determined with a plaster mark or a crack monitor.** Cracks are then to be cut open accordingly and, in the case of larger cracks, to be cut crosswise (e.g., flex or joint cutter). Then must fix with corrugated screed fastener across the course. Before further treatment, a primer must be applied and then connected by pouring, pressing, stapling and / or filling. Alternative, cracks can be reworked with a crack-bridging coating system or crack bandages. The respective crack treatment must be decided on site.

d) Joints

Existing joints require special attention. All expansion and structural joints in the subsurface that are subject to major movements must not be closed with a force fit. These joints must be incorporated into the surface covering and formed with suitable joint profiles. Alternatively, angles can be inserted as edge protection and the joint sealed with elastic joint sealants.

Joints in heated screeds are usually small expansion joints that serve to accommodate changes in length of the heated screed in the event of temperature changes and must not be closed with a force fit.

Construction joints (e.g., concreting joints), predetermined breaking joints and similar joints that are created for the controlled formation of cracks during the drying of screeds and concretes can, if necessary, be treated how cracks, provided no movement is expected. The determination must be made on site. Flank breakouts are to be reprofiled accordingly with an epoxy resin filler or mortar.

e) Cavities and voids

Defects, breakouts, and holes in the substrate can be closed and reprofiled using an epoxy resin filler or epoxy resin mortar.

Cavities can be easily identified by simply tapping the surface or by using a heavy tool, a chain or a steel ball that is pulled or rolled across the floor. If there are hollow spots, the sound will change.

Cavities must either be pried open and treated like defects, in individual cases an attempt can be made to cast a low-viscosity epoxy resin through holes in the cavities.

8 Hazard material information

The **transport of dangerous goods** is subject to extensive and complicated regulations. In general, their marking can recognize dangerous goods. Please refer to our leaflet "Information on the transport of dangerous goods" in which you will find detailed information.

9 Protective measures

When fully cured, CONICA coating systems are physiologically harmless and many of the products are additionally tested and classified as low emission product. The unmixed individual components are largely hazardous substances. Please **observe the instructions in the safety data sheets (MSDS) and the labels on the containers!**

When processing reaction resin plastics, always make sure that the skin do not come into contact with these substances and that no splashes in the eyes. **Safety glasses and gloves are always to be worn (PPE - Personal Protective Equipment).** Before starting work, apply a grease- and silicone-free **skin protection cream.** **Soiling of the skin must be cleaned immediately with soap and water or suitable cleaning agents.** **Rinse eyes immediately with plenty of water and then with sterile Isogutt solution (available from pharmacies).** **Corresponding eyewash devices must be kept available during processing.** **Then see a doctor immediately.**

When working indoors, good ventilation is recommended even when using solvent-free products. Further **information** on the products can be found **on the label texts and in the safety data sheets.** Helpful hints for the processing of synthetic resin products can be found in the Guidelines for the Handling of Epoxy Resins of the professional construction association "Arbeitsgemeinschaft der Bau Berufsgenossenschaften (BRD)" (www.wingisonline.de) or the SUVA 1854.d (guideline for the prevention of accidents caused by fires and explosions as well as occupational diseases in the use of synthetic resins). *SUVA: Swiss National Accident Insurance Fund*

Information relating to the correct type of protective gloves to wear can be found in the test Report: "Gloves for Solvent Free Epoxy Resins" and "The Correct use of Protective Gloves." English information for suitable chemical resistant gloves:

CONICA – General processing guidelines Functional Flooring

For protective gloves when processing polyurethane resins and isocyanates, you can find information under the following link:

<https://www.bgbau.de/themen/sicherheit-und-gesundheit/gefahrstoffe/gefahrstoffe-beim-bauen-renovieren-und-reinigen/epoxidharze/handschuhe/>

In a few cases, excessive exposure can cause allergic reactions. If a person is sensitized through contact with improper use, this can lead to breathing difficulties (e.g., asthma).

In most cases, the vast majority of individuals show a decrease in symptoms, or they recover completely once exposure is reduced.

On 24 August 2020, Annex XVII on the restriction of isocyanates under Regulation 1907/2206 on REACH of the European Commission entered into force. According to this regulation, chemical products with a total monomeric diisocyanate content of more than 0.1 percent by weight may only be used in the future if users who come into direct contact with the material have completed training.

This means NO ban on products with an isocyanate content > 0.1% by weight.

This regulation was adopted in order to provide the user with safety when handling products containing diisocyanate, provided that the application is carried out in accordance with the necessary safety measures and sound risk management.

Furthermore, it has been proven that no diisocyanate can be found in ready-cured products. These are only found in reactive chemicals (mixtures) and react with other substances (polyols), e.g., to form a polyurethane product.

In concrete terms, this means that from 24 August 2023, every professional user of such products must be trained in accordance with the requirements of Annex XVII of the REACH Regulation and must be trained in the future. This training must be completed by an EHS expert in person or in the form of an **e-learning** and concludes with an examination and the awarding of a certificate to be presented if necessary, which is valid for five years and must then be renewed.

In order to carry out the trainings, an **online training platform** has been developed. You can reach them at:

<https://www.safeusediisocyanates.eu/de/>

Due to the large number of different industries and trades affected by the regulations, there are various training modules on this platform. The training module relevant for the processing of our hand-processed liquid resins is **module 049 Polyurethane adhesives, floor bonding and coatings and waterproofing (except spray applications)**.

The module is available in German, English, French, but will gradually be offered in the various European languages. The average processing time is given as about 40 minutes. Following the training module, a multiple-choice test with 15 questions must be completed, after which a personalized certificate is sent to the registered person to document the training participation.

Further training modules for spray applied polyurethane or polyurea resins are available, e.g., **module 033 Spraying outside a ventilated booth , Open handling of hot or warm formulation, Cleaning, and waste**

10 Hints

In general, our information in the technical data sheets applies to individual products or systems. In particular, the points of application, processing instructions and substrate pre-treatment must be considered. In the event that individual cases of application have not been documented in our technical data sheets, in the system planners or in execution instructions, a guarantee can only be accepted by us if there is a written confirmation on our part. Unless otherwise indicated, we refer to the general terms and conditions herein.