CASEA

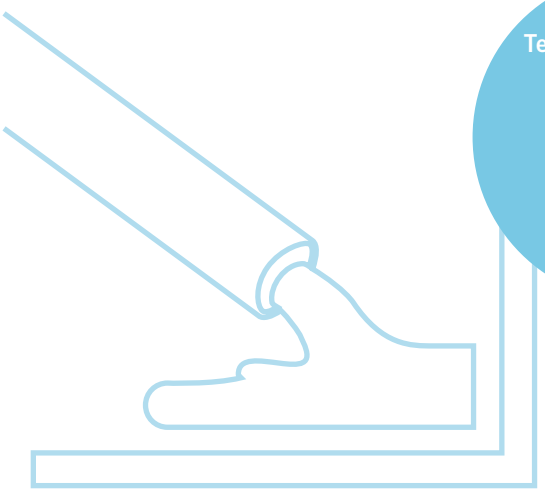
WORKING FOR THE FUTURE

Binder systems for self-levelling screed

Self-levelling compounds from CASEA, sand and water – that's all it takes! CASEA self-levelling screeds offer all the functional advantages that only a self-levelling screed can deliver.
casea-gips.de/en

CASEA **online**

For technical information, see our website under
casea-gips.de/en/downloads.
Our application experts are also on hand
to offer practical advice.



Technical information to download:

CASEA general information

The right binder is key to ensuring quality. Under the brand name RADDIBIN, we offer calcium sulphate binders that meet the highest quality standards and are specifically matched to the required application. CASEA products combine the advantages of all possible calcium sulphates – from anhydrite based on the purest FGD gypsum and natural or synthetic anhydrites to alpha hemihydrate. This ensures the outstanding product properties of calcium sulphate self-levelling screed – from production to application.

CASEA – All you need

The impressive quality advantages of CASEA are the result of a unique manufacturing process:

- Quality – consistent binder properties enable the highest quality screed
- Economic efficiency – through efficient binders with high strength potential
- Time savings – thanks to high laying output

We obtain the maximum performance from gypsum!

The advice from our application experts or our printed informational material is always based on the best of our knowledge and many years of practical experience. However, all information should be considered non-binding guidance – including with regard to any third-party intellectual property rights. Our information and notes on laying do not release users from the obligation to check for themselves that the products we supply are suitable for the planned purpose. The application, use and processing of our products are not within our control and are therefore exclusively the responsibility of the party applying, using or processing the product. Should the issue of liability nevertheless arise, for all damage it is limited to the value of the goods we have supplied. Of course we guarantee the perfect quality of the products we supply in accordance with our General Terms and Conditions of Sale and Delivery.

Self-levelling screed with CASEA. All you need

Self-levelling compounds from CASEA: sand and water – that's all it takes! CASEA self-levelling screeds offer all the functional advantages that only a self-levelling screed can deliver. The difference might not be visible. But it is noticeable.

Not all self-levelling screeds are equal. It always depends on what they contain. How good is the sand? How clean is the water? And, above all, how good is the quality of the binder? Fluctuations could turn laying the screed into a stressful race against time. Or valuable hours could be lost because the screed doesn't set. This is why it pays to exclusively use self-levelling screed with high-quality binders from CASEA. With CASEA-brand binders, screed layers are always certain that the self-levelling screed will react and can be laid exactly as expected. There's no need for time-consuming experimentation, and it makes no difference which system the material comes from – be it a mobile screed factory, ready mix truck or bagged goods.

Even after it is laid, everything flows smoothly: CASEA self-levelling screeds offer all the functional advantages that only a self-levelling screed can deliver. And as everyone knows, they are simply unbeatable when it comes to making good floors.

For more information about the various CASEA products for self-levelling screed, continue reading this brochure or visit casea-gips.de/en.

You will also find interesting information on working with self-levelling screed in conjunction with the different laying methods. It's worth a read!

Four raw materials – One quality standard

All CASEA products for calcium sulphate screed are based on binders that comply with EN 13454. We combine the advantages of all possible calcium sulphates in our products – from anhydrite based on the purest FGD gypsum and natural or synthetic anhydrites to alpha hemihydrate. This ensures the outstanding product properties of self-levelling screed – from production to application.

Self-levelling screeds with CASEA binders achieve outstanding strengths – based on their high content of reusable materials and above-average reactivity. And to ensure that this excellent, consistent quality is delivered at all times, CASEA binders are continuously monitored in accordance with EN 13454.

Currently available CASEA-brand binders:*

RADDIPLUS:
System- and aggregate-specific calcium sulphate compound for mobile screed factories, ready-mixed dry mortar and two-chamber systems.

	Raw material base
RADDIPLUS T:	Thermal anhydrite
RADDIPLUS A:	Alpha hemihydrate
RADDIPLUS NTS:	Thermal, synthetic and natural anhydrite
RADDIPLUS NT:	Natural and thermal anhydrite
RADDIPLUS NA:	Natural anhydrite and alpha hemihydrate

RADDITRANS:
System- and aggregate-specific calcium sulphate compound for ready-mixed wet mortar.

	Raw material base
RADDITRANS T:	Thermal anhydrite
RADDITRANS NTS:	Thermal, synthetic and natural anhydrite
RADDIPLUS NT:	Natural and thermal anhydrite

Bagged goods for building screeds:
casufloor AB 30 syn in bags (CAB 30 in accordance with EN 13454, based on synthetic anhydrite)

* To ensure reliable, efficient delivery logistics, the availability of individual products may vary by region.

Make the best of your floors – With CASEA screeds

The better the binder, the better the screed. The clearest proof of our products' quality is our many satisfied customers. Renowned mortar manufacturers and screed layers from Germany and abroad have relied on binders from CASEA for years.

The quality of the binder is key for the quality of the self-levelling screed.

Things are flowing well

Good self-levelling screed is easy to work with, allowing you to cover much more area in the same time.
1,000 m² a day or more are easy to achieve – laid largely without joints.

With CASEA, you can enjoy all the application advantages that calcium sulphate self-levelling screeds offer

_ High laying output
_ Excellent flow properties – save application time and effort
_ Largely self-levelling and self-compacting

Sets in next to no time

As CASEA screed sets quickly, it can be walked on within 24 hours. Self-levelling screeds made with RADDIPLUS A or RADDIPLUS NA can even be walked on after 12[1] hours.

The screed that won't get you down

This is not just a figure of speech, but a genuine, unbeatable argument in favour of self-levelling screed: you can lay it while standing instead of working on your knees.

Even after laying, everything flows smoothly...

CASEA makes full use of the functional advantages of calcium sulphate self-levelling screed:

_ Dimensional stability – allowing for largely joint-free laying
_ Homogeneous mortar structure across the entire layer thickness
_ No compacting or smoothing required
_ No bulging edges
_ High pressure resistance and flexural strength
_ No strength-reducing hollows in the screed
_ Excellent thermal conductivity – ideally suited for underfloor heating systems (heating conduits completely enclosed! Early heating is not a problem. Please also note the instructions on page 17 of the heating protocol)
_ Suitable for all conventional floor coverings

And: the surface of the set screed is extremely even and highly durable.

Calcium sulphate self-levelling screeds are environmentally friendly, sustainable building materials. Product-specific information is increasingly required for evaluating the sustainability of buildings. The relevant data is provided in the Environmental Product Declaration for calcium sulphate self-levelling screeds and conventional calcium sulphate screed.[2]

[1] Dependent on weather conditions

[2] www.gips.de

Two systems.
And one is as good as the other

Irrespective of which system you choose, both guarantee the same ease of laying and quality. Assuming you use CASEA.

Maximum efficiency on major construction sites
A mobile screed factory transports sufficient material for around 350 m² of screed – perfect for smaller to medium-sized projects. However, major construction sites require an additional supply. This is where the great advantage of binder types RADDITRANS T and RADDIPLUS T comes into play. They enable direct delivery via ready mix truck.

The procedure is quite simple
The mobile screed factory is set up and prepared in the morning. The loaded quantity of sand and binder can be used to produce self-levelling screed mortar as usual. In the course of the day, transit mixers feed fresh mortar directly into the mixing chamber of the mobile screed factory – no need to reload sand or binder on the construction site. The mobile screed factory then takes over the pumping function and ensures trouble-free screed installation. It also enables on-demand laying down to the last square metre, while reducing the need for the time-consuming disposal of leftover materials.

SYSTEM 1

RADDITRANS in the ready mix truck on the construction site; set up the pump and hose – ready.

Nothing could be easier

SYSTEM 2

RADDIPLUS and sand delivered to the construction site in a mobile mixer. Connect the water – that's all there is to it. Installation can begin.

Always works –
Conventional construction site screed
casufloor AB 30 syn for construction sites. Simply mix with sand and water and install in earth-moist or plastic consistency.

CASEA screeds – Always the best choice

With CASEA screeds, all common screed constructions are possible:

_ Base-bonded floor screed
_ Floor screed laid on a separating layer
_ Floor screed on insulation layers
_ Heating floor screed

CASEA self-levelling screeds are suitable for the renovation of old floors, as well as for raised and hollow floor systems. Interior applications can be carried out in accordance with the applicable fire protection requirements and standards.

CASEA self-levelling screeds are outstanding in all indoor spaces: residential buildings, office and administrative buildings, hotels and restaurants, buildings for cultural or social institutions, etc. The entire spectrum of commercial floor finishes, including rigid finishes, can be used as the top floor covering. Observe the manufacturer's laying guidelines.

Calcium sulphate screeds are not suitable for outdoor use or in commercial wet rooms (swimming pools, commercial kitchens, etc.)!

When the screed has to be good: CASEA anhydrite binder!

Always at the highest level of quality to ensure that everything flows equally smoothly for planners, screed layers and developers. Anhydrite binders from CASEA are a real alternative – and not only to cement-based screed.

QUICK-DRYING
EARLY HEATING
EXCELLENT DIMENSIONAL STABILITY

CASEA base-bonded floor screed
in accordance with DIN 18560-3:2006

Base-bonded floor screeds are designed to make the relatively uneven surfaces of load-bearing substrates usable. Base-bonded floor screeds must be firmly connected to the substrate across the entire surface without any gaps; in other words, through a frictional connection. This ensures that any forces acting on the screed are always directly transferred to the substrate.

Prerequisites

Base-bonded floor screeds must be protected against rising residual substrate moisture and vapour diffusion. The planner is responsible for planning any necessary waterproofing measures. Before laying the self-levelling screed, make sure the hardening process in the concrete substrate is completed. Any remaining moisture in the concrete must be taken into consideration for drying the self-levelling screed. Building joints must be carried over into the self-levelling screed with the same width – otherwise it is possible to lay the screed largely without joints.

Substrate

For the force-transmitting bond to be effective, the surface of the substrate must meet specific criteria:

- Sufficient strength
- Non-slip, clean texture
- As free from cracks and loose components as possible. In addition, the surface must not be soiled by oil, fuel, residual mortar, coating agents or other contaminants that could damage the bond.
- For substrates made of wood, steel, and mastic asphalt or magnesite screeds, the option of a base-bonded construction in accordance with DIN 18560-3 must be assessed on a case-by-case basis. Special measures such as special bonding bridges may be required.
- There must be no lines, cables, pipes or other installations present on the substrate.
- The evenness of the substrate must meet the criteria defined in DIN 18202.
- If the substrate has impermissible unevenness in accordance with DIN 18202 or if there are pipelines or cable installations present, it may be necessary to use levelling screed. The levelling screed must be completely bonded to the substrate and cover pipes such that a load-bearing substrate is created for the subsequent floor construction.
- Absorbent substrates like concrete and cement-based screed must be pre-treated to ensure that the water is not extracted from the self-levelling screed mortar too early (primer/bonding bridge!).

Laying considerations

The thickness of a base-bonded floor screed laid with CASEA screed is not a determining factor for its load-bearing capacity. For manufacturing reasons, a minimum layer thickness of more than three times the maximum aggregate size must be complied with. For calcium sulphate screed, the minimum strength class C20/F3 (without floor covering) or at least C25/F4 (with floor covering) must be reached.

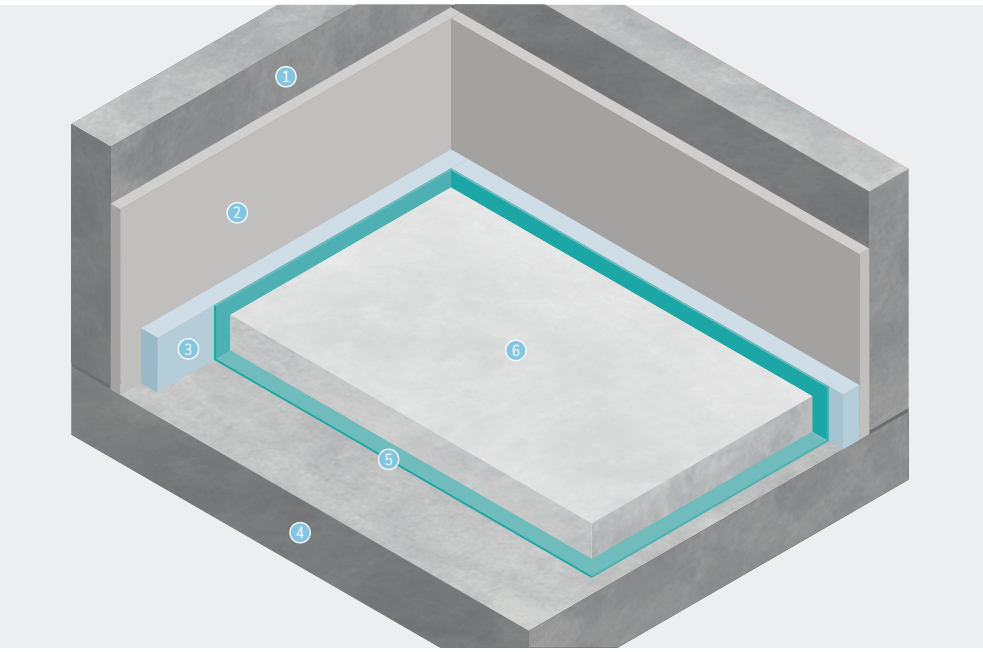
Key points

- Clean, dry substrate
- Pre-treat absorbent substrates
- Carry over building joints
- Observe minimum thickness

The construction notes presented are excerpts and refer to the standards and rules valid at the time of creation. The current version of the corresponding DIN standards are always definitive.

CASEA screed laid on a separating layer in accordance with DIN 18560-4:2012

Floor screed laid on a separating layer can move freely. It is used when the substrate is not suitable for base-bonded floor screed. A common application is the fast, affordable renovation of floors in buildings built before 1945.



1. Wall/masonry
2. Plaster
3. Perimeter insulation strips
4. Substrate
5. Separating layer
6. Screed

Prerequisites

In screed installation, the separating layer is not the same as a sealing measure in accordance with DIN 18195. It only enables the screed plate to move freely on the substrate. Building joints must be carried over into the self-levelling screed with the same width – otherwise it is possible to lay the screed largely without joints. The walls must be plastered before the screed is laid.

Substrate

A key prerequisite for laying the separating layer is a dry, clean substrate. Larger holes and cracks must be closed. Bumps, pipelines, etc. must be evened out such that in the end, a load-bearing substrate with a flat surface is available.
The flatness tolerances of the substrate in accordance with DIN 18202 must be complied with. Installations must be evened out, see DIN 18560-2 (5.2).

Laying considerations

Lay perimeter insulation strips (≥ 8 mm, depending on the room size) on all rising construction components like walls, columns and heating pipes.

It is very important to properly develop the separating layer. The separating layer may consist of a single layer. Seals and vapour barriers are not considered separating layers.

Keep in mind:

_ Ensure that there are no folds or creases in the layer
_ The individual sheets should overlap by approx. 10 cm

Possible materials for the separating layer are:

_ Polyethylene film (≥ 0.15 mm thick)
_ Plastic-coated paper (≥ 0.15 mm thick)
_ Other products with comparable characteristics
_ Bitumen-soaked paper with a minimum grammage of 100 g/m²
_ Glass matting with a minimum grammage of 50 g/m²

The recommendation is to weld or bond the overlap to ensure that screed cannot seep under the separating layer. The minimum rated thickness of the screed depends on the strength class and the load capacity – also see DIN 18560-4.

Examples for defining the rated thickness of calcium sulphate self-levelling screeds on separating layers

Distributed load in kN/m²	Concentrated load in kN	Examples for defining the load capacities	Calcium sulphate self-levelling screed CAF [a]			Possible rated thickness reduction compared to conventional screed		
			F4	F5	F7	F4	F5	F7 [a]
≤ 2.0	≤ 1	e.g., residential sector	≥ 35	≥ 30	≥ 30	0	5	5
≤ 3.0	≤ 2	e.g., office, medical practice	≥ 45	≥ 40	≥ 35	10	5	5
≈ 4.0	≤ 3	e.g., classrooms, restaurants	≥ 50	≥ 45	≥ 40	15	10	5
≈ 5.0	≤ 4	e.g., department stores	≥ 60	≥ 50	≥ 45	10	10	10

a) Valid only for conventional calcium sulphate screeds. DIN 18560 does not provide any dimensioning guidelines for cement-based screeds in strength class F7. * CAF stands for Calcium Sulphate Self-Levelling Screed, the standard abbreviation used in German screed classifications.

The planner must match the strength class and thickness of screeds on a separating layer to the type of use and load. For use with a floor covering, the strength must be at least class F4; for use without a floor covering, the strength must be at least class F5.

Key points

_ Carry over building joints
_ Balance out unevenness in the substrate
_ Properly install the separating layer

CASEA screed on an insulation layer in accordance with DIN 18560-2:2022

Stricter requirements for noise and thermal insulation – particularly in residential and administrative buildings – require a screed installed on an insulation layer. The minimum thickness for this construction depends on the expected traffic load – as well as the stability of the insulation layer.

Prerequisites

When planning and laying self-levelling screed on an insulation layer, observe the following principles and guidelines:

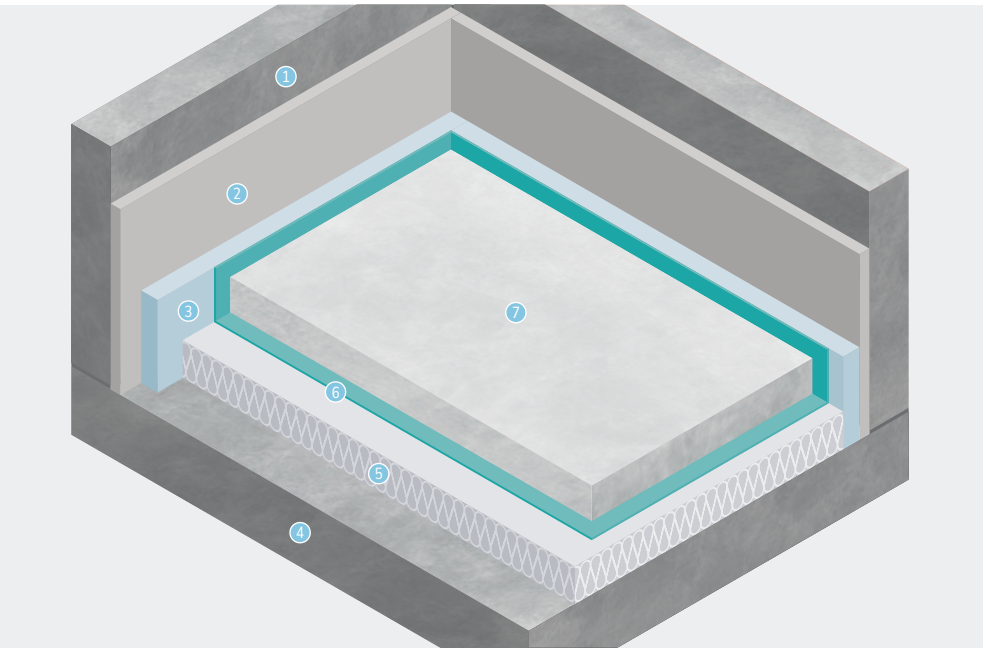
_ The noise and thermal insulation characteristics primarily depend on the selected material. Accordingly, it is important to carefully specify suitable insulating materials as described in DIN 18560-2 (3.3).

_ The construction planner is responsible for specifying sealing measures to prevent rising moisture.

Building joints must be carried over into the self-levelling screed with the same width – otherwise it is possible to lay the screed largely without joints. The walls must be plastered before the insulation and screed are laid.

Substrate

A key prerequisite for laying the insulation layer is a dry, clean substrate. If the substrate is damp, suitable sealing measures must be implemented. Close larger holes and cracks and level out unevenness to ensure that the insulation layer lies flat across the entire surface.



1. Wall/masonry
2. Plaster
3. Perimeter insulation strips
4. Substrate
5. Insulation layer
6. Separating layer
7. Screed

NEW
Min. thickness of 40 mm under **ceramic floor coverings** no longer applicable.

NEW
Min. thickness of CAF [a] raised **from 30 to 35 mm** in new DIN 18560-2

Examples for defining the rated thickness of calcium sulphate self-levelling screeds on insulation

Distributed load in kN/m²	Concentrated load in kN	Examples for defining the load capacities	Calcium sulphate self-levelling screed CAF [a]			Possible rated thickness reduction compared to conventional screed		
			F4	F5	F7	F4	F5	F7 [c]
≤ 2.0	≤ 1	e.g., residential sector	≥ 35 [b]	≥ 35 [b]	≥ 35 [b]	10	5	0
≤ 3.0	≤ 2	e.g., office, medical practice	≥ 50 [b]	≥ 45 [b]	≥ 40 [b]	15	10	10
≤ 4.0	≤ 3	e.g., classrooms, restaurants	≥ 60	≥ 50	≥ 45	10	10	10
≤ 5.0	≤ 4	e.g., department stores	≥ 65	≥ 55	≥ 50	10	10	10

For concentrated loads up to 2 kN, the compressibility of the insulation layer must be max. 5 mm; for higher concentrated loads it is max. 3 mm.
a) For insulation layers ≤ 40 mm, the screed thickness of calcium sulphate screeds can be reduced by 5 mm; however the screed thickness must be no less than 35 mm. * CAF stands for Calcium Sulphate Self-Levelling Screed, the standard abbreviation used in German screed classifications.
b) In exceptional cases, higher compressibilities of up to 10 mm are permissible. Here, the rated screed thickness must be increased by 5 mm.
c) Valid only for conventional calcium sulphate screeds. DIN 18560 does not provide any dimensioning guidelines for cement-based screeds in strength class F7.

The insulation layer can consist of one or multiple layers of the insulating material suitable for the intended type of screed. The compressibilities are added together. In the case of concentrated loads, additional consideration must be given to their footprints. The same applies to path loads for surfaces that are driven upon.

Laying considerations

In the case of self-levelling screed that is laid floating, it is very important to lay the perimeter insulation strips correctly. The perimeter insulation must be fitted precisely around all rising components like walls, columns and heating pipes. The perimeter insulation strips must be dimensioned such that free movement of at least 5 mm is possible on all sides of the screed. The thickness of the perimeter insulation strips should be a minimum of 8 mm. This is the only way to reliably avoid noise and thermal bridges.

Before applying the screed, the insulation layer must be covered with a suitable material. The covering must form a sealed trough that remains watertight until the self-levelling screed has set. Further, if the perimeter strips themselves do not function as the cover, the edges of the trough must rise to the upper edge of the perimeter strip. The minimum rated thickness of the screed is based on the strength class of the self-levelling screed – see DIN 18560-2:2022 and the corresponding table on this page.

Do not trim the overhang of the perimeter insulation strips until the tiles or plates have been grouted, or after flexible floor coverings have been filled. This will prevent unwanted forces in the screed and noise bridges.

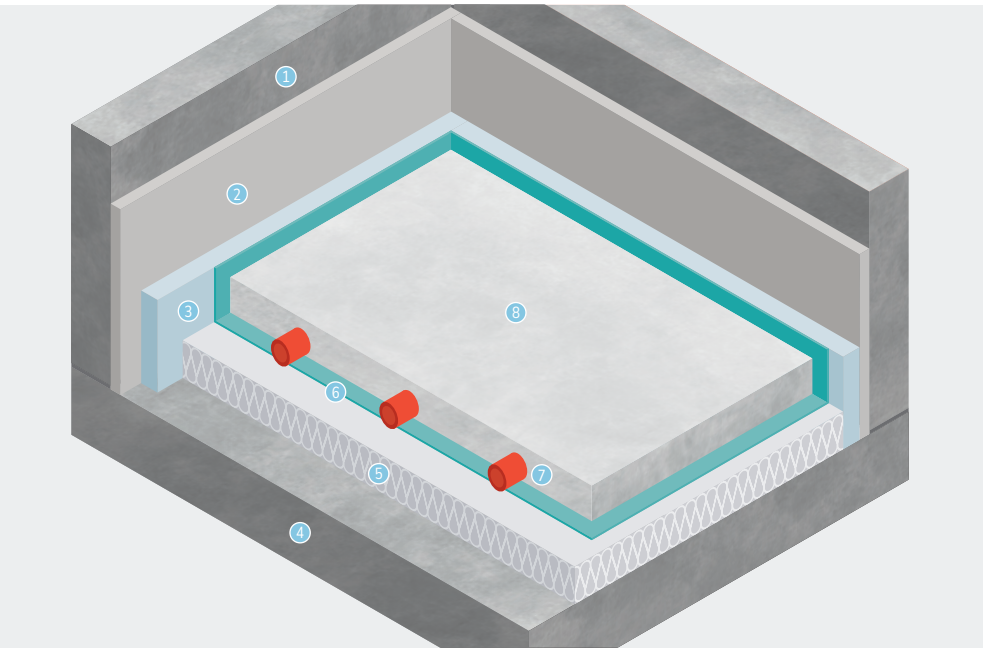
Systematically laying the insulation layer

When laying the insulation layer, ensure that butt joints are tight; the insulation plates must be laid with an offset. Lay multi-layer insulation layers such that the joints are staggered.

CASEA heating floor screeds
in accordance with DIN 18560-2:2022

Heating floor screed is a screed that can be directly heated and is installed as floating screed. The calcium sulphate self-levelling screed encloses the heating pipes without leaving any voids, thus ensuring optimal thermal transfer. The position of the heating pipes has a significant impact on the thickness of the screed.

1. Wall/masonry
2. Plaster
3. Perimeter insulation strips
4. Substrate
5. Insulation layer
6. Separating layer
7. Heating pipes
8. Screed



Prerequisites

Important: When planning and installing heating floor screed, the same rules and principles apply as for installing screed on an insulation layer.

However:

_ The perimeter insulation strips must be ≥ 10 mm in order to accommodate the linear expansion that occurs when the floor is heated. Free movement of the screed by at least 5 mm must be possible on all sides. Screed movements resulting from changes in temperature must not be restricted. In addition, the physical building requirements (for example, those for noise protection) must be complied with.

_ The insulation material and heating pipes must be laid horizontally to ensure even heating pipe coverage.

_ Before the floor covering is laid, the residual moisture must be tested with a CM unit. Therefore, the relevant test points must be defined in consultation between the architect and the screed installer.

For heating floor screed as well, building joints must be carried over into the screed construction. The heating circuits must be planned such that they do not cross any structural joints. Thanks to the low temperature expansion coefficient of CASEA self-levelling screed, expansion joints must only be included in exceptional cases: for example, in heating floor screed surfaces between which a significant temperature difference can occur. The heating pipes must be securely fastened to prevent the generation of noise bridges and make it impossible for the pipes to float upwards. The pipes must be inspected for leakage before the screed is laid. They must be filled with water at the time the screed is installed.

Substrate

The quality of the substrate must meet the same conditions as those that apply when self-levelling screed is laid on an insulation layer. Please read the corresponding section on the two previous pages.

Laying considerations

Please read the information regarding installation under “Screed on insulation layers”. The minimum rated thickness of the screed is based on the strength class of the self-levelling screed and the position of the heating pipes in the screed – see DIN 18560-2:2022 and the corresponding figure on this page. For type A screed, the rated thicknesses indicated in the figure “Examples for defining the rated thickness of screeds on insulation” are increased by the outer diameter of the heating pipe.

Calcium Sulphate Self-Levelling Screed with CASEA – Heating advantage

Calcium sulphate screeds with CASEA binder really show their strengths when it comes to the heating protocol: Cement-based screeds typically must not be heated **until after around 21 days**, but CAF enables **heating to begin much earlier**.

With CASEA self-levelling screeds, heating can begin **after just 2 to 4 days** – depending on the binder type. This significantly shortens the construction period, as **the screed is ready for covering much earlier**. It also enables the downstream steps to start earlier.

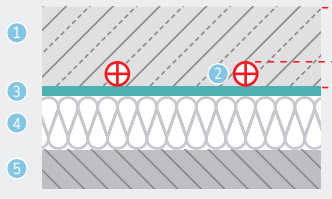
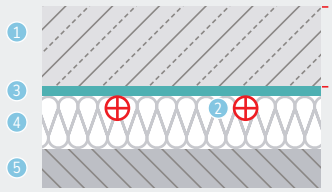
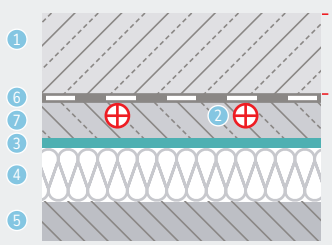
For detailed information about heating and cooling down, see the relevant **heating protocol**.

When operating the underfloor heating system, the flow temperature must **not permanently exceed 55 °C.** Brief periods at 60 °C are permitted.

Key points

_ Carry over building joints
_ Additional joints for surface sections heated differently
_ Heat and cool down as specified
_ Remember the heating protocol

Figure for defining the rated thickness

Type	Schematic layout	Min. pipe coverage in mm for CAF *	Min. pipe coverage in mm for CA	Min. screed thickness in mm
A		35	45	35 + d 45 + d
B				35 CAF * 45 CA
C				35 CAF * 45 CA

Example of a screed of strength class F4 in a living room:
Load capacity for concentrated load <= 1kN and distributed load <= 2 kN/m².
Insulation layer compressibility <= 5mm

1. Screed
2. Heating element
3. Cover
4. Insulation layer
5. Load-bearing substrate
6. Separating layer
7. Levelling screed

* CAF stands for Calcium Sulphate Self-Levelling Screed, the standard abbreviation used in German screed classifications.

Joint formation

Self-levelling screeds offer the major advantage that even large surfaces can usually be laid without joints. However, there are important rules about joints that must be observed.

Edge joints

Edge joints function as expansion joints between the screed and the wall, and between the screed and rising structural components or built-in components. They are usually formed by installing a perimeter insulation strip.

- For unheated screed constructions, the minimum thickness of the perimeter insulation strips is 8 mm.
- For large, seamless surfaces, the edge joints must be thicker. Expected temperature fluctuations, the surface size and a thermal expansion coefficient of approx. 0.012 mm/m K must be considered here.

Expansion joints

Expansion joints enable the free movement of screed surface sections against each other and prevent the transfer of noise and vibrations. For adverse room geometries, adverse drying conditions or unfavourable temperature control, increased material stress can occur in doorways or at protruding corners. In these cases, installing expansions joints in self-levelling screeds is a proven solution.

Unheated screed constructions

Unheated screed surfaces are usually installed without joints. Joints are provided solely to prevent the flanking transmission of noise and vibrations. Strong direct sunlight through large window surfaces results in very uneven heating of screed surfaces. In the case of rigid floor covering, the recommendation is to add joints for edge lengths greater than 20 metres. The joints must be adapted to the room geometry and the floor covering design.

CASEA is an outstanding solution for laying large surfaces seamlessly

Example of the dimensioning of perimeter insulation strips

_ Side length: 25 m
_ Thermal expansion coefficient: 0.012 mm/m K
_ Temperature difference: 40 K (e.g. from 5 °C to 45 °C)
-> 25 x 0.012 x 40 = 12 mm thermal expansion
_ Assumed compressibility of perimeter insulation strip: 70%
-> 12: 0.70 = 17.1 mm min. thickness of perimeter insulation strip

In this case, the recommendation would be to double a 10 mm-thick perimeter insulation strip.

Additional notes

_ Expansion joints must be carried over in the floor covering. As they have a significant impact on the design of the floor, for best results define the final placement of the expansion joints in coordination with the participating trades, the planner and the developer during an on-site meeting.
_ Depending on the floor covering, joints may be necessary. The floor covering manufacturer must provide information regarding joints.

New sealing standard

Since June 2017, the DIN 18534 standards have regulated sealing in indoor spaces in Germany. The German Gypsum Association and Informationsdienst Holz has published a supplementary guideline for bathrooms and wet rooms in timber and drywall construction: *Merkblatt 5*. It contains many practical notes on laying screed in these spaces (available in German only). Based on detailed example applications that go above and beyond the standard, the information sheet presents possible applications of calcium sulphate screeds in wet rooms and describes the required sealing measures.

The planner creates the joint plan. For information on planning, see the leaflet “Joints in calcium sulphate self-levelling screeds” published by the German Gypsum Association (available in German only). AND IF YOU HAVE QUESTIONS ... please contact your CASEA sales representative or the CASEA application experts.

Heating protocol in accordance with DIN EN 1264, Part 4. CASEA floor products

Laying screed

The heating planner must define at least one measuring point per room for checking the residual moisture with a CM unit. For larger rooms (from approx. 50 m²), more are required. There must not be any heating pipes within a radius of 10 cm around the measuring point. Precise definition of the measuring points will ensure that the top floor installer does not damage any heating pipes when taking the sample. The measuring points should consider areas where drying is less effective: for example, areas with higher screed thickness.

Carrying out the heating procedure

A proven way to accelerate the construction workflow is to combine the functional heating with screed drying – in coordination with the heating system installer. After a post-installation, product-specific waiting period (see product data sheet), the screed is heated as described above and remains heated until it is dry – without interruption or night reduction. Initial heating begins with a flow temperature of 25 °C, which is maintained for 3 days. On each successive day, the flow temperature is raised by 10 °C until the maximum system temperature is reached (≤ 55 °C max.). This maximum flow temperature should be maintained until the required CM residual moisture (≤ 0.5% CM) required by the individual type of floor covering is reached. Before cooling down, a “film test” can be run. However, this does not replace the CM measurement – it is only a useful orientation aid. After the screed has dried, the flow temperature is gradually lowered by 10 °C per day until the initial temperature (25 °C) has been reached.

The heating system installer must conscientiously complete the heating protocol, which remains with the developer as a record. In accordance with DIN EN 1264, Part 4 (formerly DIN 4725), the heating protocol must contain the following important information:

_ The flow temperature upon heating
_ The maximum configured flow temperature
_ Film test/CM test

Start

This heating protocol does not apply for the casufloor DE on the ROTH Quick Energy Tacker System! Depending on the binder composition, heating is started in accordance with the product data sheet:

_ When installing: RADDIPLUS A, flow at lowest possible temperature
_ 2 days: RADDIPLUS / RADDITRANS T
_ 4 days: RADDIPLUS / RADDITRANS, NT, NTS, NA, casufloor C25/F5 / C30/F6

Important

During the heating procedure, all screed surfaces must be kept clear of building materials or similar items. During the first two days, the screed must be protected against direct sunlight and drafts. After 48 hours, intensive ventilation is necessary – optimally, cross-ventilation five times per day. From this point in time, draughts are no longer harmful. Absolutely avoid frost, and rain water must not touch the screed surface. (For more information, see Merkblatt No. 2 from the German Association for Insulation Systems, Plaster and Mortar, VDPM)

Additional information

1. “Schnittstellenkoordination von Flächenheizungs- und Flächenkühlungssystemen in Neubauten“, BVF, Hagen, May 2024
2. “Trocknung von Calciumsulfatfließestrichen”, IWM, VDPM Merkblatt No. 2 10/2022
3. “Beschleunigte Trocknung von Calciumsulfatestrichen”, Bundesverband Estrich und Belag, 2021

HEATING PROTOCOL

Developer:	Heating installer:
Construction site:	Site manager:
Screed installed on:	Heating system:
Rated screed thickness:	Heating element coverage min: mm max: mm

This data sheet is intended to provide guidance to the best of our knowledge and replaces all earlier data sheets. However, its contents are not legally binding.

Screed drying (without night reduction, outdoor temperature control shut down!)

Heating procedure	**Flow temperature**	**Signature**
Heating start (see product data sheet) Date:	Temperature at: °C	
Date:	Temperature increased to: °C	
Date:	Temperature increased to: °C	
Date:	Temperature increased to: °C	
Until date:	Maximum flow temperature maintained	

Test for drying / Film test (does not replace CM measurement!)

Date	**Dry YES / NO**	**Signature**

Lowering the flow temperature (no night reduction, outdoor temperature control shut down!)

Heating procedure	**Measure**	**Signature**
Date:	Temperature lowered to: °C	
Date:	Temperature lowered to: °C	
Date:	Temperature lowered to: °C	
Date:	Heating in automatic mode	

CM test

Date	**Dry YES / NO**	**Signature**

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