CEMWOOD

mineral coated wood chips

PLANNING AND SYSTEM FOLDER

www.cemwood.de

DOCUMENTATION

Company, Products, Tests & Certificates

1

COMPANY

1.1 About Us

CEMWOOD GmbH is a manufacturer of ecological levelling fills and cavity fills for ceilings and floors based on mineralised wood chips. Founded in 2009 as a start-up, we produced the first market-ready products in 2012, which were shown for the first time at BAU 2013 in Munich. In 2012, the CW2000 levelling fill was awarded the industry prize "Best of 2012".

RESPONSIBILITY AND ENVIRONMENTAL PROTECTION

Our products are CO_2-binding as a renewable raw material. Our Environmental Product Declaration (EPD) shows that we consume even more CO_2 than we produce. An active contribution to environmental and climate protection. Only wood from local forests with sustainable forestry is used for processing. We produce without chemical additives. Our fills do not give off fumes to ensure a pleasant and healthy indoor climate.

› *back to the table of contents*

1.2 Quality Claim

OUR APPROACH: WE GET THE BEST OUT OF WOODEN BUILDING MATERIAL

While maintaining good thermal insulation properties and low weight, we have fully compensated for material weaknesses in terms of durability and resistance. What's more, we increase particle pressure resistance and significantly improve the wood's physical properties. The mineralised chips achieve improved fire protection values, and: our building material has been tested as "biologically harmless" with regard to emissions of volatile organic compounds (VOCs).

STABLE AND SECURE LIKE A BONDED FILL. JUST QUICKER AND MORE DURABLE.

Our products impress with high impact sound and thermal insulation values, very good load transfer and extremely high positional stability.

Dry fills have the same characteristics as a bonded fill. The positional stability - due to the firmly defined chip shape - ensures immediate load capacity after trowelling. In combination with a load-distributing layer, the CEMWOOD dry fills are as effective as bonded fills and, unlike conventional dry fills, prevent settlement occurring in future. This makes safe construction possible.

DURABLE AND STABLE

Mineralisation reduces water absorption - avoiding the typical swelling and shrinking. CEMWOOD fills are also resistant to mould, fungi, rodents, insect infestation and rot.

TIME AND COST-SAVING

Add, trowel, done. The dry, fast and uncomplicated way - without water and binder, or additional compaction - saves time and money compared to conventional fills.

Innovative natural products, high-quality material properties, cost-effective processing: We prove that ecological and efficient construction can be combined.

› *back to the table of contents*

1.3 Customer Service

SATISFIED CUSTOMERS WITH GOOD SERVICE

- We process inquiries and orders quickly and reliably
- Our short delivery times make construction processes flexible
- Customers benefit from our many years of experience throughout Europe
- Sales and development partnerships in more than ten European countries
- Numerous sales representatives take care of projects and customers on site
- Close cooperation with innovative manufacturers of ecological products
- On-site consultancy
- Mechanical functional testing of floor structures with our own testing machines

› *back to the table of contents*

2

PRODUCTION & RECYCLING

Mineralised wood chips

AS LIGHT AS WOOD, AS HEAVY DUTY AS STONE

CEMWOOD products are produced in a multi-stage production process. Initially, the mineralisation of wood chips is defined in size and shape by a high-quality hydraulic binder. As a result, the open pore spaces of the wood structure and the surfaces of the individual chip are covered with a hardening and preservative calcium silicate hydrate layer. In the next production stages, mineralised chip fractions are processed further. At the end, the drying of the CEMWOOD fills uses 100% renewable energies from biomass power plants or biogas plants to reach a value of less than three percent by mass residual moisture. The levelling fills are as light as wood, but stable as stone. That means: The shavings do not get mouldy or rot and are resistant to vermin. However, the positive properties of wood remain. The process also guarantees the mechanical longevity of the product. The grains remain stable and do not grind. In addition, CEMWOOD fills are permeable, i.e. they adapt to the humidity of the respective room.

CEMWOOD products uses only natural raw materials. Regular tests cording to the AgBB test scheme ensure that the fills are safe in terms of emissions of volatile organic compounds (VOCs) so they do not affect the subsequent use of the building.

CEMWOOD relies on long-standing and reliable partners for the suppliers of the starting materials for the production of the fills. The production of wood chips is characterised by an environmentally friendly and resource-saving production technology. Only fresh wood from Central European forests is used for the production.

› *back to the table of contents*

Recycling = CIRCULAR ECONOMY

CEMWOOD FILLS: REMOVE AN REUSE

What does recycling mean?

Recycling (Greek kýklos=circle, Latin re=back, again) means the “processing and reuse of materials which have already been used“. (Duden) Recycling is a complex and important subject - also for the construction industry. Many materials such as glass can be easily recycled, but only with the extensive use of energy. The CO2 generated during the recycling process is harmful to the environment.

How does the recycling of CEMWOOD products work?

After their initial use and removal, CEMWOOD fills need no treatment or processing before they can be used again. Thus, strictly speaking, they are not recycled but can be immediately reused time and time again.

100% reusable thanks to their granular nature

Thanks to their non-solid, granular nature, the levelling fills can be easily removed and reused as dry fill. CEMWOOD fills can also be used as an aggregate for non-load bearing concrete. CEMWOOD fills can even be used as a soil improver.n.

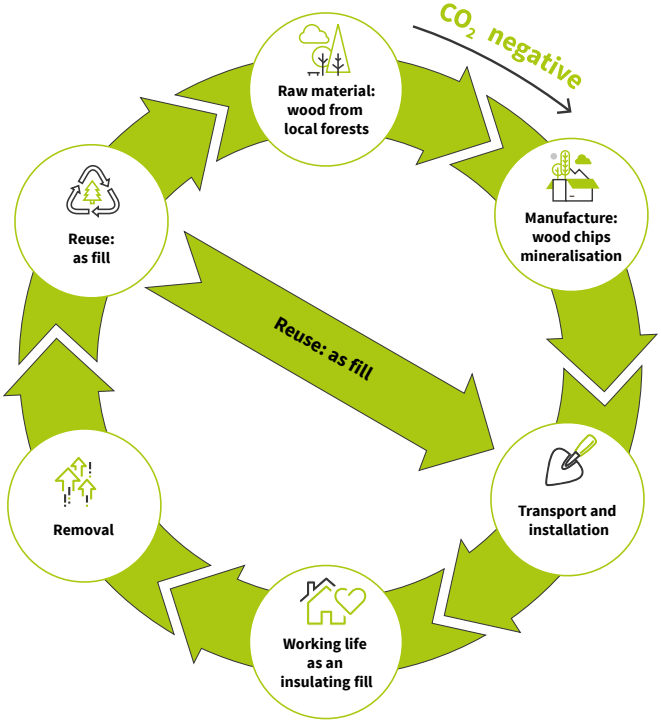
Life cycle der CEMWOOD Schüttungen

CEMWOOD fills are toxin-free. They can be reused without any further processing or disposed of without harming the environment.

AREA: REUSE
- as fill
- return to CEMWOOD

AREA: DOWNCYCLING
- as a soil improver
- as an aggregate

AREA: DISPOSAL
- disposal as building rubble in line with EWC Code 170117



3 PRODUCTS

3.1

CW1000 - THE FINE

Cavity fill and
Levelling fill: Fill height 10 - 60 mm

3.1 CW1000 FOR LOW FILL HEIGHTS

LEVELLING FILL. FILL HEIGHT: 10 - 60 mm

The fine mineralisation of the smaller chips makes CW1000 the master of low construction heights. As a cavity fill, it is also ideal for the backfilling of shafts, channels and beamed ceilings. Like all product lines, CW1000 is quick to install, without water or binder.

ADD, TROWEL, DONE.

CW1000 can be used without water or binder and, thanks to its positional stability, can be walked on immediately.

USAGE AREAS

- **Levelling fill (10 - 60 mm fill height)**
- **under all wet and dry screed systems**
- **under all OSB and wood fibre boards**
- **Cavity fill e.g. in wood beam ceilings and installation channels**

PRODUCT FEATURES

- fine mineralisation
- high load capacity
- stable as bonded fill
- heat and sound insulating
- resistant to vermin, fungus, mould and rot
- Water absorption: no swelling or shrinkage
- can be installed at low height

PROCESSING BENEFITS

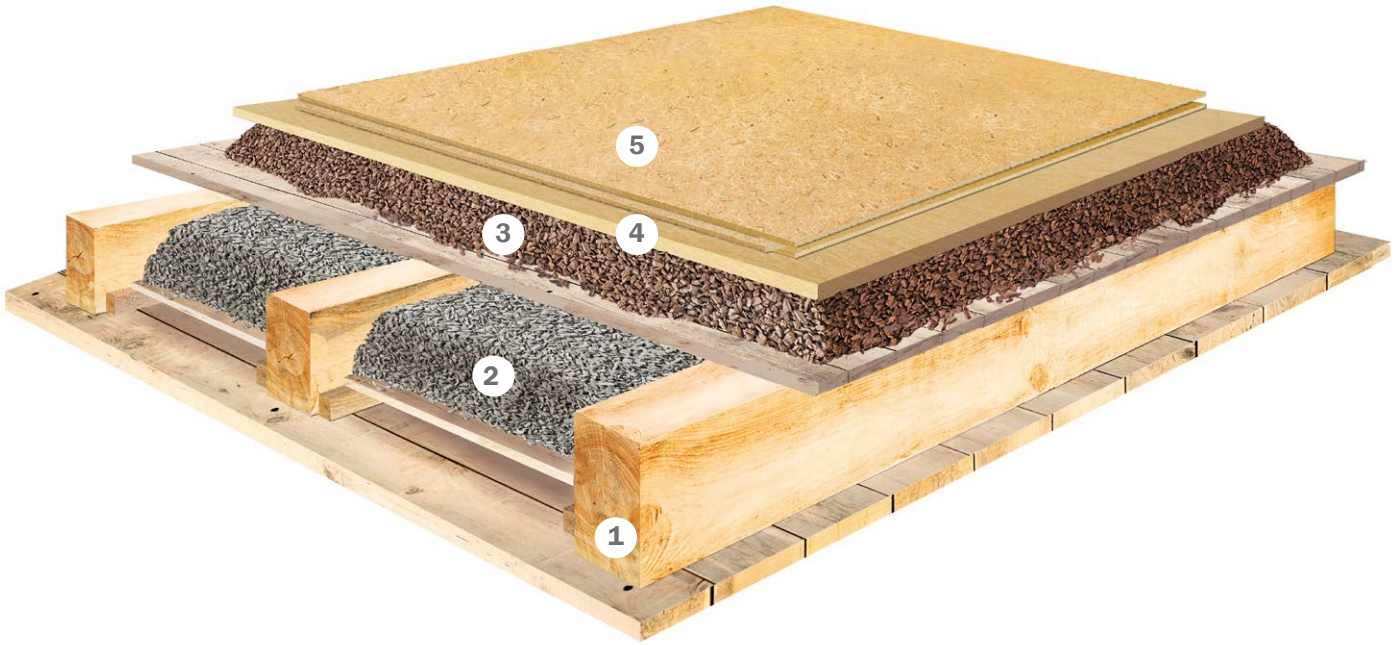
- low weight
- fast processing without water / binder
- particularly suitable for covering supply lines
- can be walked upon immediately after introduction
- low dust build-up
- avoids waste
- no compaction required

BENEFITS FOR BUILDERS

- shorter construction time, lower construction costs
- active contribution to environmental protection
- security with risk-free construction
- Sound insulation increases living quality

CW1000 „ USAGE EXAMPLE

Cavity fill in beamed ceilings



STRUCTURE

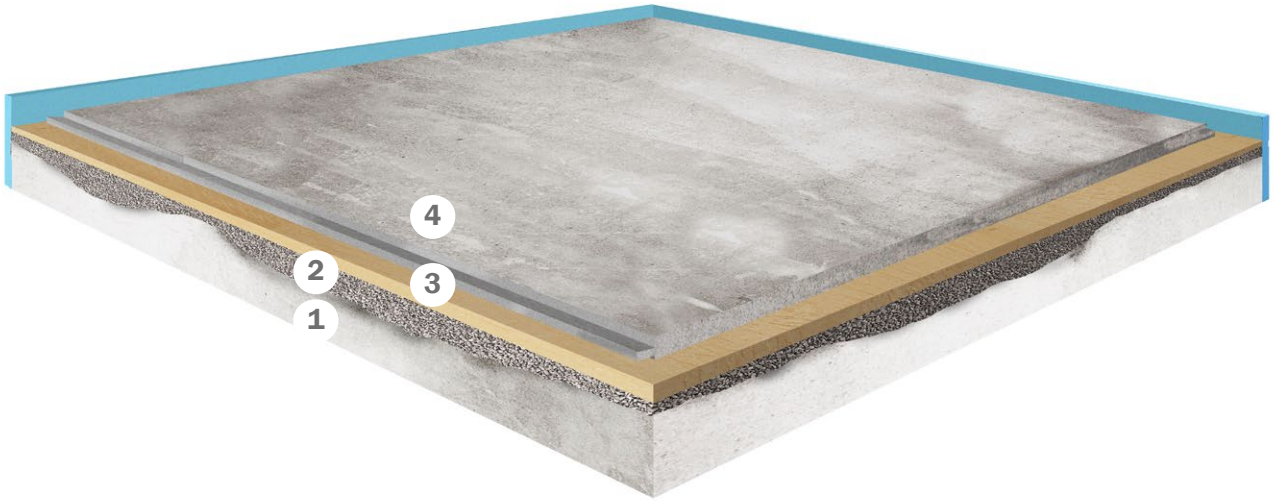
1. existing wooden beamed ceiling
2. Cavity fill CW1000
3. Levelling fill CW2000
4. load-distributing layer
   (here: wood fibre board)
5. OSB or ESB board

PERFECT FOR RENOVATIONS

CW1000 can be installed quickly and without dust, reliably filling the cavities and acting as impact sound and thermal insulation.

CW1000 „ USAGE EXAMPLE

Levelling fill for low fill heights



STRUCTURE

1. concrete floor with bumps
2. Levelling fill CW1000
3. load-distributing layer (here: wood fibre board)
4. Dry screed element

FAST AND RELIABLE

CW1000 is the ideal fill for uneven floors and low installation heights. It reliably fills in small gaps and is quick, dry and easy to add in. After trowelling, the fill can be walked on immediately saving time for future steps.

CW1000 TECHNICAL DATA

At a glance

FEATURES

Chip size	mm	1 - 5
Fire behaviour	Class	Bfl-S1
Thermal conductivity	W/mK	0.07
Grain compressive strength	N/mm^2	8.2
Fill density	kg/m^3	approx. 320
Installation height	mm	10 - 60
Packaging unit	Litres	50
Weight per cm height	kg/m^2	3.2
Material requirement per cm height	l/m^2	10

» *back to the table of contents*

3.2

CW2000 - THE STRONG

Levelling fill. Fill height: 10 - 200 mm

3.2 CW2000 FOR LARGE FILL HEIGHTS

LEVELLING FILL. FILL HEIGHT: 10 - 200 mm

The strong mineralization of the somewhat coarser fill enables fill heights of up to 200 mm. CW2000 is perfect for large bumps, beamed ceilings, vaults and more. The fill is perfectly stable so it can be walked on immediately, without recompression. The levelling fill is highly resilient and impact sound and heat insulating.

CW2000 is the first dry fill that is stable without the addition of water or other binders like a bonded fill. The teeth on the chips makes the fill extremely stable in position. With CW2000 you can build safely and risk-free without any future subsidence or cracking. In terms of processing time, it is far superior to a bonded fill.

USAGE AREAS

Levelling fill on

- **Wooden beamed ceilings**
- **Solid concrete and solid wood ceilings**
- **Board stack and glulam wood ceilings**
- **Vaulted ceilings**
- **Arches**

PRODUCT FEATURES

- strong mineralisation
- high load capacity
- stable in position, doesn't move
- heat and sound insulating
- resistant to vermin, fungus and rot
- Water absorption: no swelling or shrinkage
- can be installed at high heights

PROCESSING BENEFITS

- low weight
- fast processing without water / binder
- particularly suitable for covering supply lines
- immediately loadable after application
- low dust build-up
- Avoids waste

BENEFITS FOR BUILDERS

- shorter construction time, lower construction costs
- active contribution to environmental protection
- security with risk-free construction
- Sound insulation increases living quality

CW2000 „ USAGE EXAMPLE

Levelling fill for high fill heights

STRUCTURE

1. concrete floor with bumps
2. Levelling fill CW2000
3. additional construction layer (here: wood fibre board)
4. load-distributing layer (here: Wood fibre plate with tongue and groove)
5. Flooring

STABLE UP TO 200 mm

Thanks to its unique positional stability, CW2000 enables fill heights of up to 200 mm. Unevenness is compensated for and supply lines embedded in an uncomplicated manner.

CW2000 „ USAGE EXAMPLE

Levelling fill for high fill heights

STRUCTURE

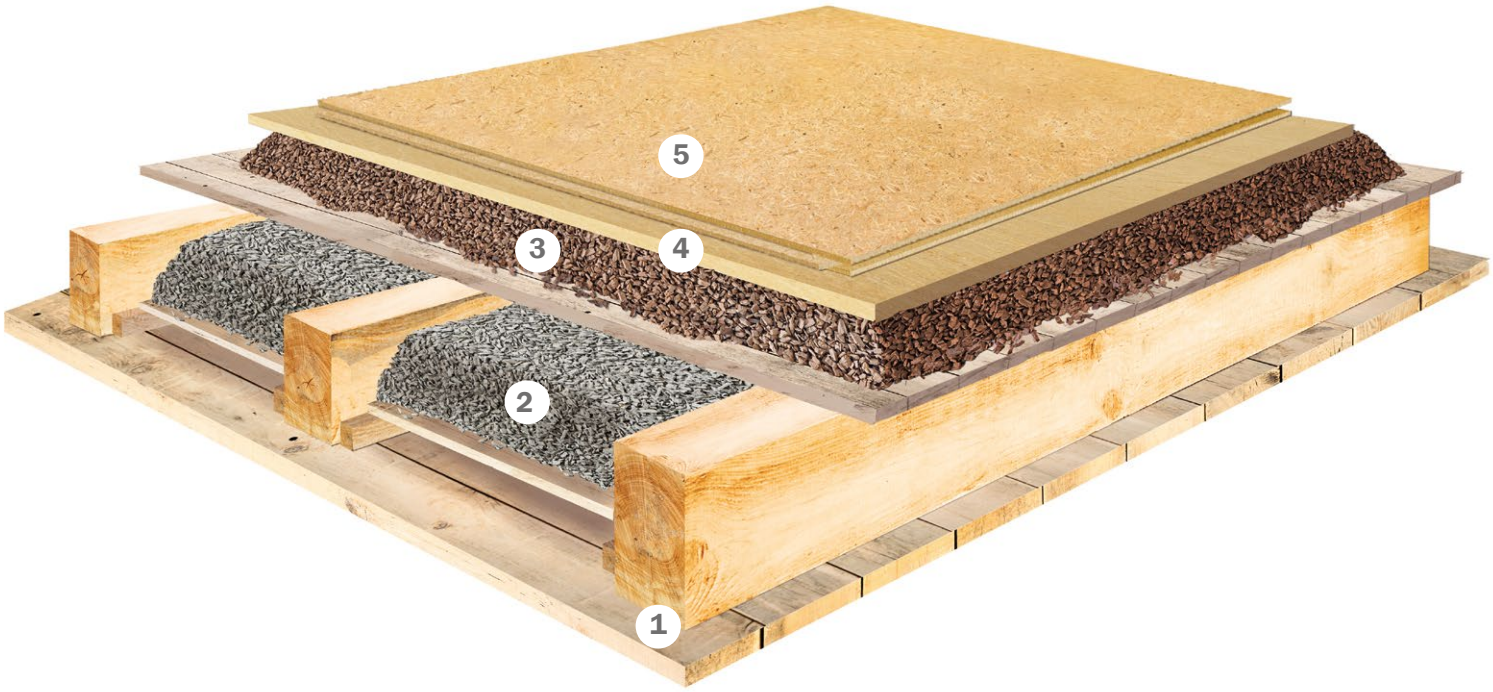
1. BSH ceiling elements
2. Drip protection
3. Levelling fill CW2000
4. load-distributing layer (here: wood fibre board)
5. ESB or OSB boards
6. Flooring (here: laminate)

COMPLETELY WOODEN SOLUTION

This floor construction is uncompromisingly ecological. Every layer is based on wood. This makes this solution healthy and consistently natural.

CW2000 » USAGE EXAMPLE

Levelling fill on wood beam ceilings



STRUCTURE

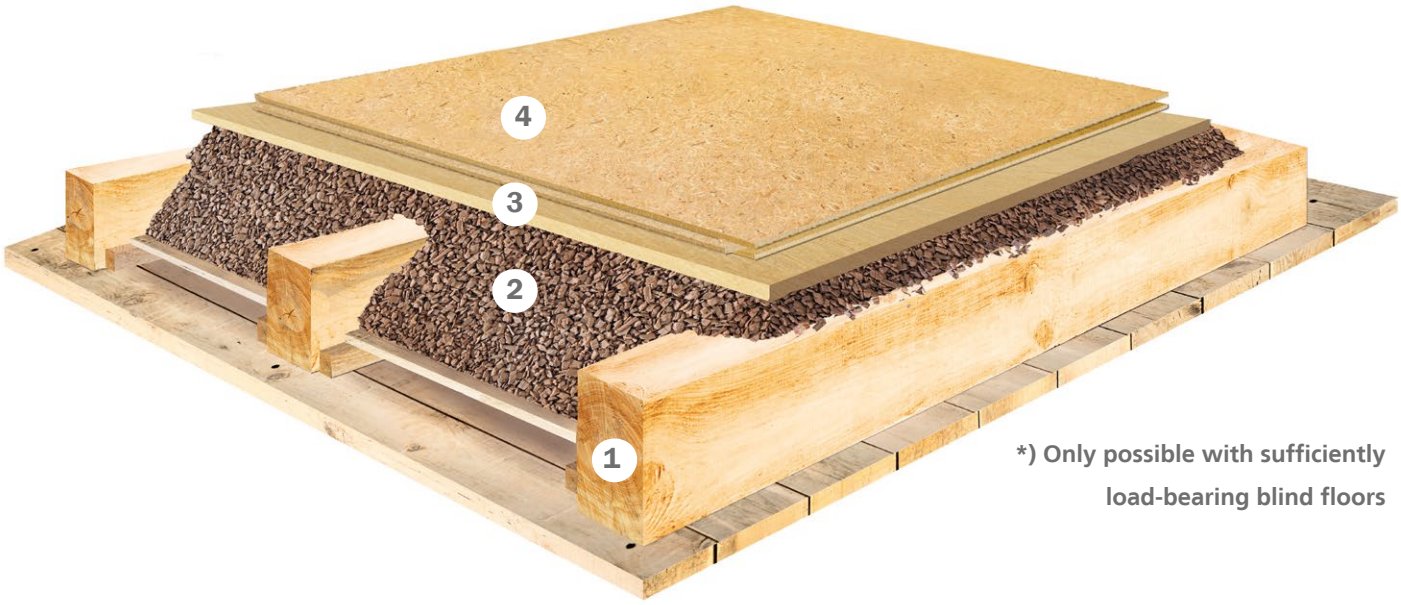
1. existing wooden beamed ceiling
2. Cavity fill CW1000
3. Levelling fill CW2000
4. load-distributing layer
   (here: wood fibre board)
5. OSB or ESB board

PERFECT FOR RENOVATIONS

The CW1000 fine fill reliably fills cavities and is complemented in doing so by the strong levelling fill, CW2000.

CW2000 » USAGE EXAMPLE

Levelling fill on wood beam ceilings*



*) Only possible with sufficiently load-bearing blind floors

STRUCTURE

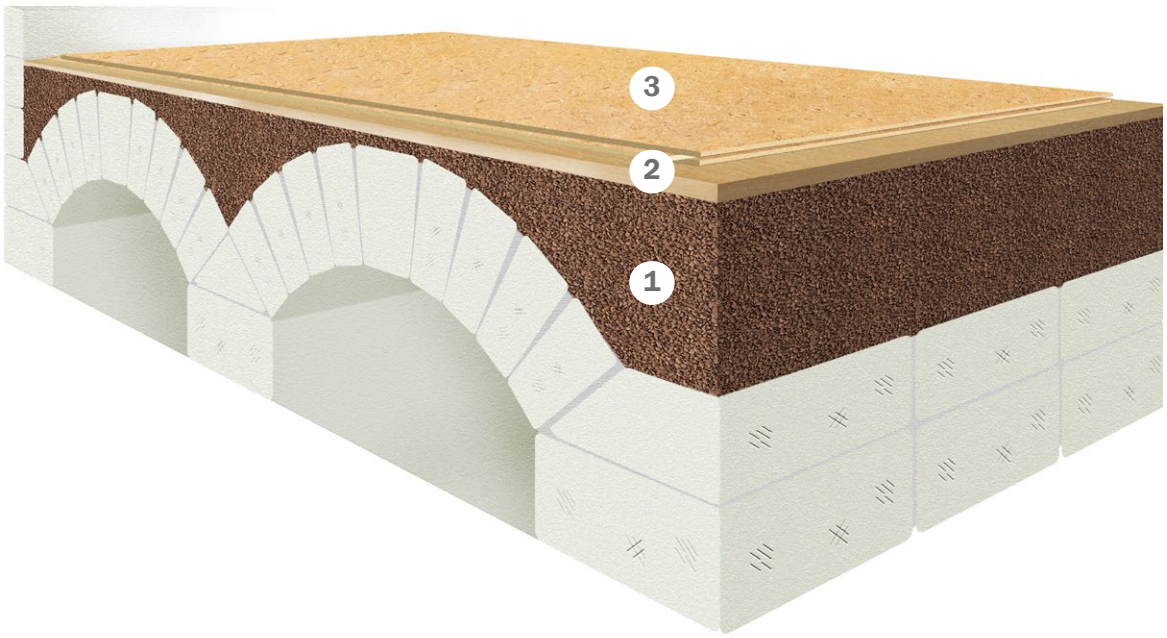
1. existing wooden beamed ceiling
2. Levelling fill CW2000
3. load-distributing layer (here: wood fibre board)
4. OSB or ESB board

PERFECT FOR RENOVATIONS

In this example, CW2000 can be used for levelling and cavity filling in one step. The dry fill enables increased impact noise and heat insulation and ensures a completely ecological floor construction.

CW2000 » USAGE EXAMPLE

Levelling fill on capped and vaulted ceilings



STRUCTURE

1. Levelling fill CW2000
2. load-distributing layer (here: wood fibre board)
3. OSB or ESB board

RESILIENT WITHOUT RECOMPRESSION

200 mm maximum fill height: This strength of CW2000 is particularly important in arched and vaulted ceilings. Nevertheless, the CW2000 levelling fill is as resilient as a bonded fill material without re-compaction or additional binders.

CW2000 TECHNICAL DATA
At a glance

FEATURES

Chip size	mm	4 - 8
Fire behaviour	Class	Bfl-S1
Thermal conductivity	W/mK	0.08
Grain compressive strength	N/mm^2	12.6
Fill density	kg/m^3	approx. 360
Installation height	mm	10 - 200
Packaging unit	Litres	50
Weight per cm height	kg/m^2	3.6
Material requirement per cm height	l/m^2	10

› *back to the table of contents*

3.3

CW3000 - THE EXTRA STRONG

3.3 CW3000 - SPECIAL FILL FOR SPORTS FLOORS AND DYNAMICALLY LOADED FLOORS

LEVELLING FILL. FILL HEIGHT: 10 - 80 mm

CW3000 is specially designed for sports floors with high dynamic loads. The extra strong mineralization increases the grain compressive strength and makes the fill extremely resilient. The special mixture contains different grain sizes. As a result, the grain skeleton is compact and can handle even greater loads.

PARTICULARLY SUBSIDENCE PROOF

The special bed for sports floors is - like all CEMWOOD fills- particularly subsidence proof. It can be added quickly and easily without water or binders and without recompression. The optimal height compensation of CW3000 is the range of 10 to 80 millimetres. Even with high loads, the extra-strong mineralization and the wood structure prevents the chips from rubbing.

USES

- **under floors with dynamic and very high loads**
- **particularly suitable for sports floors**

PRODUCT FEATURES

- extra strong mineralisation
- high grain compressive strength
- subsidence proof
- high load capacity
- Water absorption: no swelling or shrinkage
- resistant to vermin, fungus and rot
- sustainable and ecological

PROCESSING BENEFITS

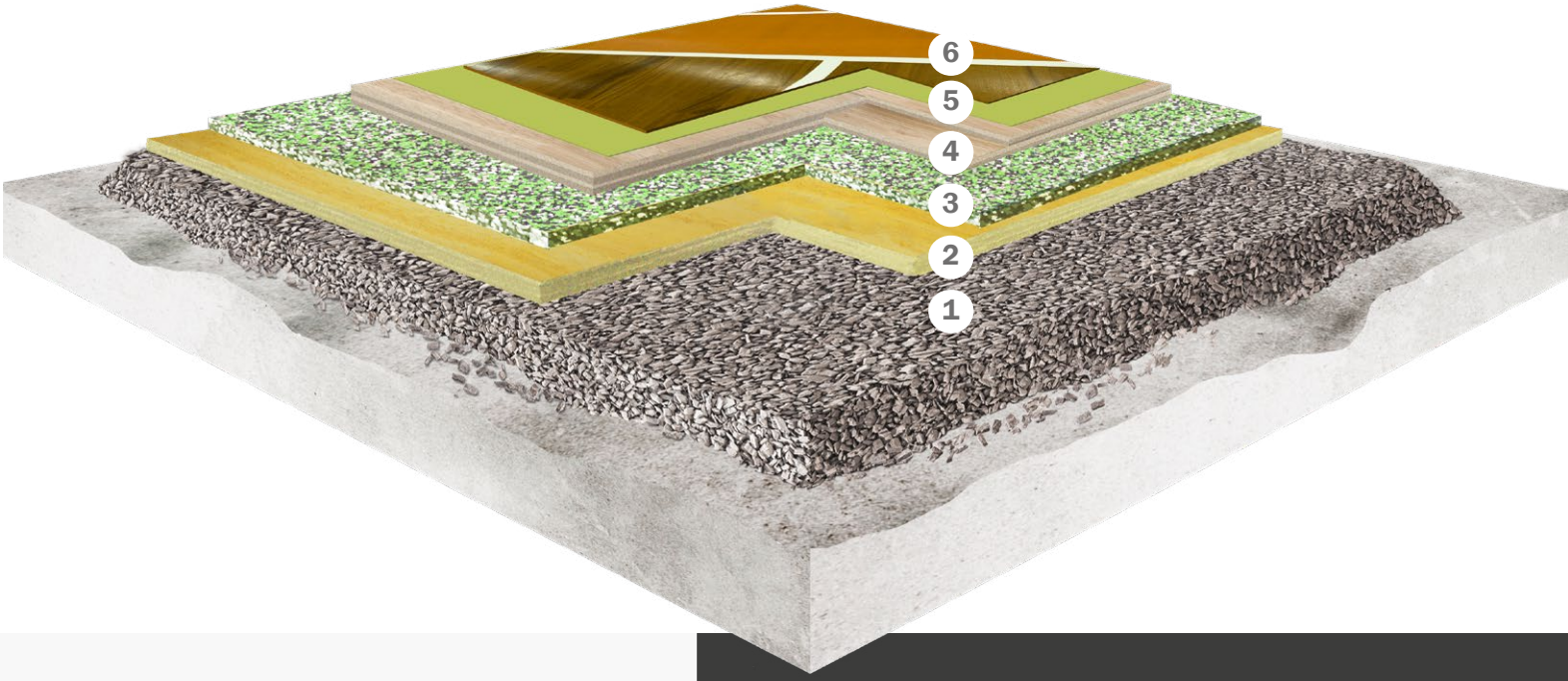
- fast processing without water / binder
- no drying time
- immediately loadable after application
- low weight
- low dust build-up

BENEFITS FOR BUILDERS

- Sports floors are exposed to high dynamic loads. Particularly in multifunctional halls with different requirements such as club sports, school sports and public events. Subsidence and cracks must be avoided, jumps and falls must be cushioned. All this is guaranteed by CW3000's extra-strong mineralization, extremely high load-bearing capacity and exceptional positional stability.

CW3000 „ USAGE EXAMPLE

Special fill for sports floors



STRUCTURE

1. Levelling fill CW3000
2. Thermal insulation
3. PUR composite foam
4. Birch plywood
5. jointless PUR coating
6. Sports flooring

PARTICULARLY SUBSIDENCE PROOF

The special fill for sports floors is particularly subsidence-proof. It can be added quickly and easily without water or binders and without recompression. Even with high loads, the extra-strong mineralization and the wood structure prevents the chips from rubbing.

CW3000 TECHNICAL DATA

At a glance

FEATURES

Chip size	mm	5 - 10
Fire behaviour	Class	Bfl-S1
Thermal conductivity	W/mK	0.085
Grain compressive strength	N/mm^2	15.4
Fill density	kg/m^3	approx. 370
Installation height	mm	10 - 80
Packaging unit	Litres	50
Weight per cm height	kg/m^2	3.7
Material requirement per cm height	l/m^2	10

» *back to the table of contents*

3.4

CW020 - THE EXTRA FINE

3.4 CW020 - THE DRY LEVELLING FILL

Levelling fill. Fill height: 0 - 20 mm

The alternative to hydraulically setting levelling and equalising compounds

With an optimised, narrow-band grain distribution and special extended single chip grain size, the product is particularly suitable for classic applications of hydraulically setting levelling and equalising compounds. CW020 is an innovative new development for thin-layer levelling up to 20 mm on ceiling constructions. CW020 is introduced dry and is a fast and inexpensive alternative solution to the common systems.

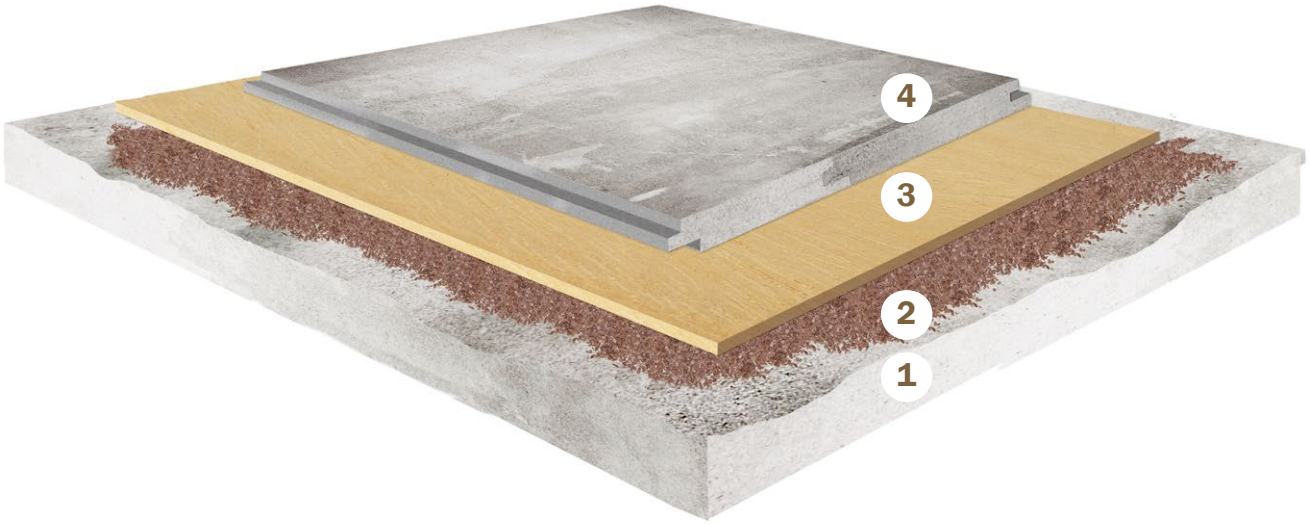
USAGE AREAS

Especially suitable for uneven and "zero" leaking areas. For levelling:

- **Concrete floors**
- **Screeds**
- **Wooden floors**

CW020 „ USAGE EXAMPLE

The dry equalising and levelling fill



STRUCTURE

1. Concrete floor
2. CW020
3. load-distributing layer (here: wood fibre board)
4. Dry screed element

THE DRY LEVELLING FILL

Due to the special grain distribution CW020 is especially suitable for the compensation of small bumps and zero leaking areas. It is a quick and inexpensive alternative solution to wet levelling compounds without added water or binder.

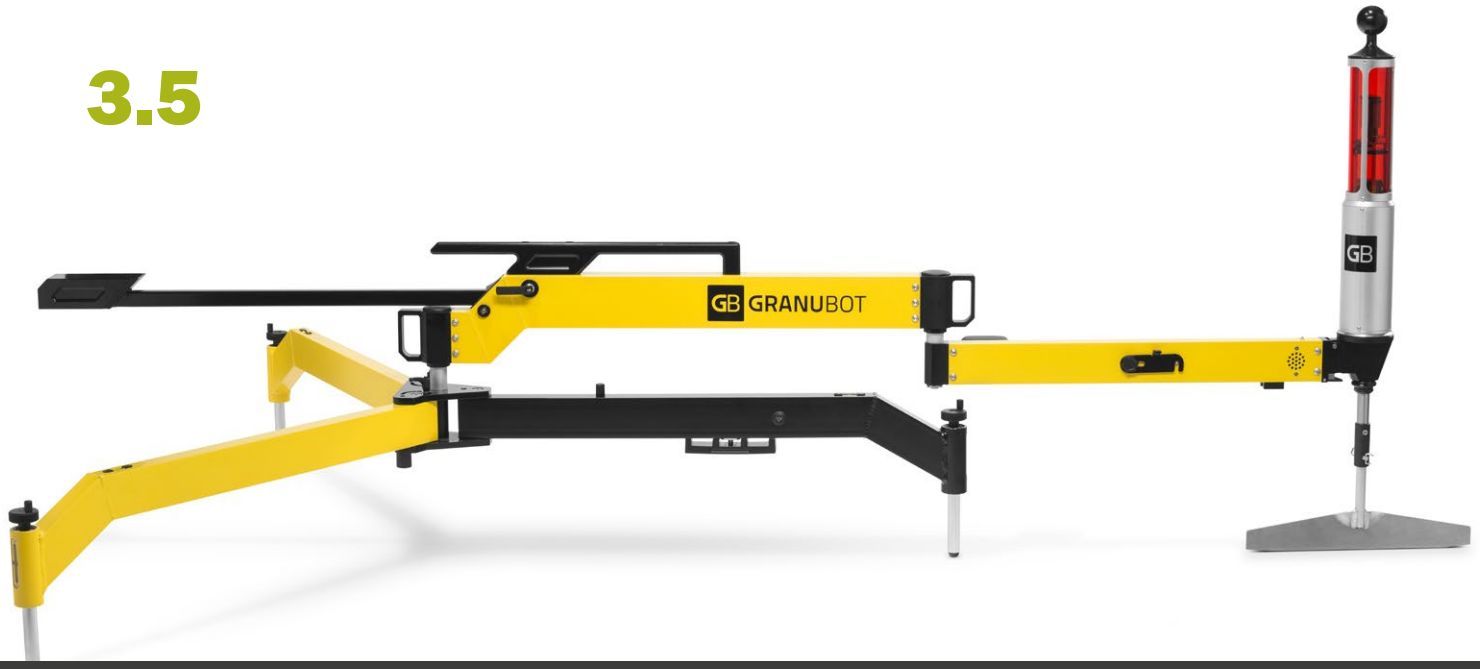
CW020 TECHNICAL DATA
At a glance

FEATURES

Chip size	mm	1-4
Fire behaviour	Class	Bfl-S1
Thermal conductivity	W/mK	0.085
Grain compressive strength	N/mm^2	8.2
Fill density	kg/m^3	approx. 320
Installation height	mm	0-20
Packaging unit	Litres	50
Weight per cm height	kg/m^2	3.2
Material requirement per cm height	l/m^2	10

» *back to the table of contents*

3.5



GRANUBOT - THE QUICK HELPER

Levelling and trowelling in one step

3.5 GRANUBOT - THE QUICK HELPER

Level floors and remove dry fillings in one step.

Aligning the levelling device is child's play. The device is balanced using the set screws and automatically aligns to the rotation laser.

THE STRENGTHS OF THE LEVELLING DEVICE BECOME APPARENT IN HARD-TO-REACH AREAS.
With the small sword, the fill can be distributed between heating pipes with millimetre precision.

SAVES TIME AND PROTECTS THE BACK
The built-in Granubot battery with a running time of about 12 hours enables simple transport and wireless processing of the fill. The low weight, the assistive technology and quick use make it much kinder on the body. Due to the time and cost savings, the Granubot pays for itself already after 1000 m². Not only that: Even levelling the fill on inclined levels, for example in shower areas, can be carried out without any problems by tilting the laser. And all this in a back-friendly working posture.

BENEFITS AT A GLANCE:

- **very simple installation**
- **low weight**
- **no wires and easy to move**
- **rapid addition and trowelling of fill**
- **simple working**
- **also handles difficult to reach areas**
- **millimetre accurate distribution**
- **back-friendly working**
- **reduces working time**
- **low labour costs**
- **Quickly pays for itself**

3.6

AT THE EDGE: CW EcoFix THE ECOLOGICAL BINDER

The perfect solution for edge areas

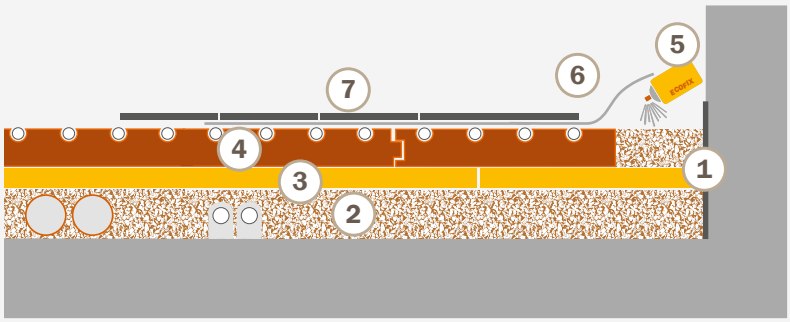
3.6 CW ECOFIX

Especially for edge areas with glued or filled floor coverings

Edge areas that arise when installing underfloor heating systems can easily be filled with the CW2000 levelling compound. CEMWOOD has also developed a perfect solution for laying floor coverings (e.g. tiles) to be glued or filled in these edge areas: The CW EcoFix ecological binder is sprayed on the equalised levelling fill. CW EcoFix penetrates about 15 mm, solidifying the fill in the surface area. After a drying time of approx. 12 h, a glass fibre mat can be laid and tile adhesive effortlessly distributed. CW EcoFix can also be mixed directly with CW2000 to produce a solid bed. This creates a highly loadable fill for heavily used floor areas.

USAGE EXAMPLE

CW2000 and CW EcoFix with Lithotherm heating system



1. Edge insulation strip
2. CW2000 levelling fill
3. LITHOWOOD Wood fibre board
4. Lithotherm system with aluminium composite pipe
5. CW EcoFix spray for edge areas
6. Glass fibre mat under tiled surface
7. Tiles

3.7

GaLa DEKO STIXX

For creative gardeners

3.7 CEMWOOD GARDEN DECOR CHIPS

GaLa DEKO STIXX offer creative design options for the garden. The decor chips are available in three coordinated colours: hay brown, anthracite and earth brown.

The mineralized wood chips combine the properties of natural stone with the advantages of wood. They are produced from fresh regional wood with the bark removed. Covered with minerals, the decorative chips are weather-resistant and can be kept for several years. The special manufacturing process means the chips are UV stable because the colour of the chip is based on stable oxide colours. GaLa DEKO STIXX offers a good alternative to purely organic mulch. Because: The minerals prevent decomposition; the chips do not mould or rot. Costly and time-consuming mulching is not required. And: As the chips do not rot, no nutrients are removed from the plants. This significantly decreases the need for fertiliser.

GaLa DEKO STIXX also improve the water balance of the beds. The capillary-breaking properties of the chip layer, which only absorb minimal water due to their mineral properties mean that water can drain through almost unhindered. On the other hand, the water does not evaporate easily, because the decor chips also prevent intense evaporation from wind. They also reduce soil erosion. With a basic pH of about 9.0, the GaLa DEKO STIXX can neutralise acidic media. This in turn can promote plant growth. Their properties mean that GaLa DEKO STIXX are classified as soil additives according to the Fertilizers Ordinance. In addition, they are safe from wind and can be freed from leaves with a leaf blower. The recommended bed height is 5 to 10 centimetres.

USAGE AREAS

- Garden beds and planters
- Parks
- Sloping properties
- Hedges

PRODUCT BENEFITS

- durable and weather resistant
- stable in position and safe from being blown about
- doesn't require time-consuming mulching
- lower fertilizer requirement
- water saving (reduced evaporation)
- plant friendly, as little rotting
- colour stable, no discolouration and can be used creatively
- weed retardant
- no soil erosion

TECHNICAL DATA GaLa DEKO STIXX

At a glance

FEATURES

Max. chip length	mm	60
Fill density	kg/m³	approx. 260
Rec. Fill height	cm	5 - 10
Packaging unit	Litres / Sack	50
	Litres / Big Bag	2000
Amount per palette	Sacks	39

AMOUNT REQUIRED

1 m² can be covered with a 50 litre sacks. Depending on the planting and the flatness of the soil, chips from a Big Bag can cover a surface area of about 40 m².

EARTH BROWN

ANTHRACITE

HAY BROWN

» *back to the table of contents*

4

SYSTEM SOLUTIONS & FLOOR STRUCTURES

4.1 INTRODUCTION

Floors are highly stressed components within buildings. They take care of numerous tasks: in addition to the basic usage-related design, they also serve to accommodate electrical, plumbing and ventilation components and also ensure sound and fire protection. Furthermore, floors have a significant influence on the perceived comfort of a building. These criteria place high demands on the selection of the individual components within floor superstructures.

CEMWOOD offers excellent proven solutions for the different requirements in the areas of construction, renovation and modernisation. In addition to their excellent sustainability, the ecological CEMWOOD levelling fills are characterised by their very good mechanical and physical properties, which offer the ideal basis for professional floor systems.

4.2. SUPERSTRUCTURES WITH DRY SCREED

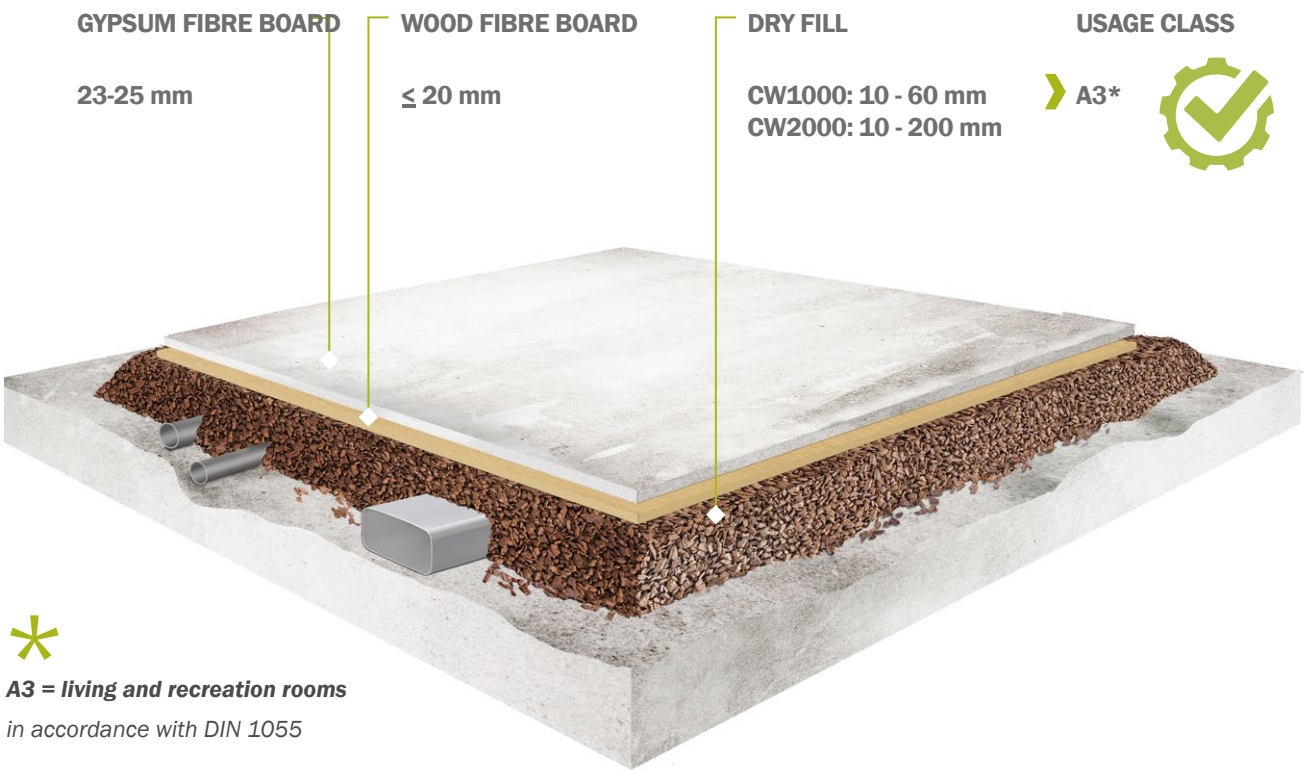
Dry screeds combine numerous advantages: they are suitable for many applications and can be laid quickly and easily. As no additional moisture is introduced into the building, rapid construction is possible and drying times are reduced. Due to their simple processing, dry screeds are also very suitable for DIYers.

CEMWOOD dry fills are the optimal base for dry screeds. CEMWOOD levelling fills can be processed in a cost-effective and time-saving manner without the addition of water and binders. Complex re-compaction of the fill is not required. The homogeneous teeth on the chips ensures excellent positional stability.

Examples of constructions are shown in the following. Further tested systems are available on request.

4.2.1 Superstructure with gypsum fibre boards

Example construction with gypsum fibre board



A3 = living and recreation rooms
in accordance with DIN 1055

Example construction with gypsum fibre board

WOOD FIBRE BOARD
10-20 mm

CEMENT FIBRE BOARD NORIT-TE 20/25
20 mm/25 mm

DRY FILL
CW2000: 10 - 100 mm

USAGE CLASS
› A3*

* ***A3 = living and recreation rooms***
in accordance with DIN 1055

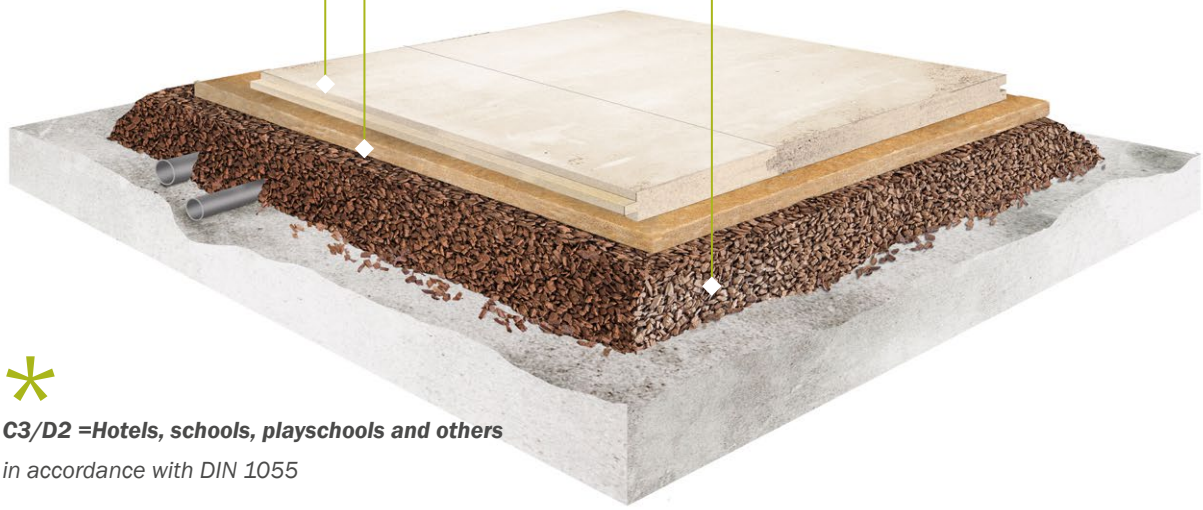
Example construction with gypsum fibre board

CEMENT FIBRE BOARD
32 mm

WOOD FIBRE BOARD
20 mm

DRY FILL
CW2000: 100 mm

USAGE CLASS
› C3/D2*



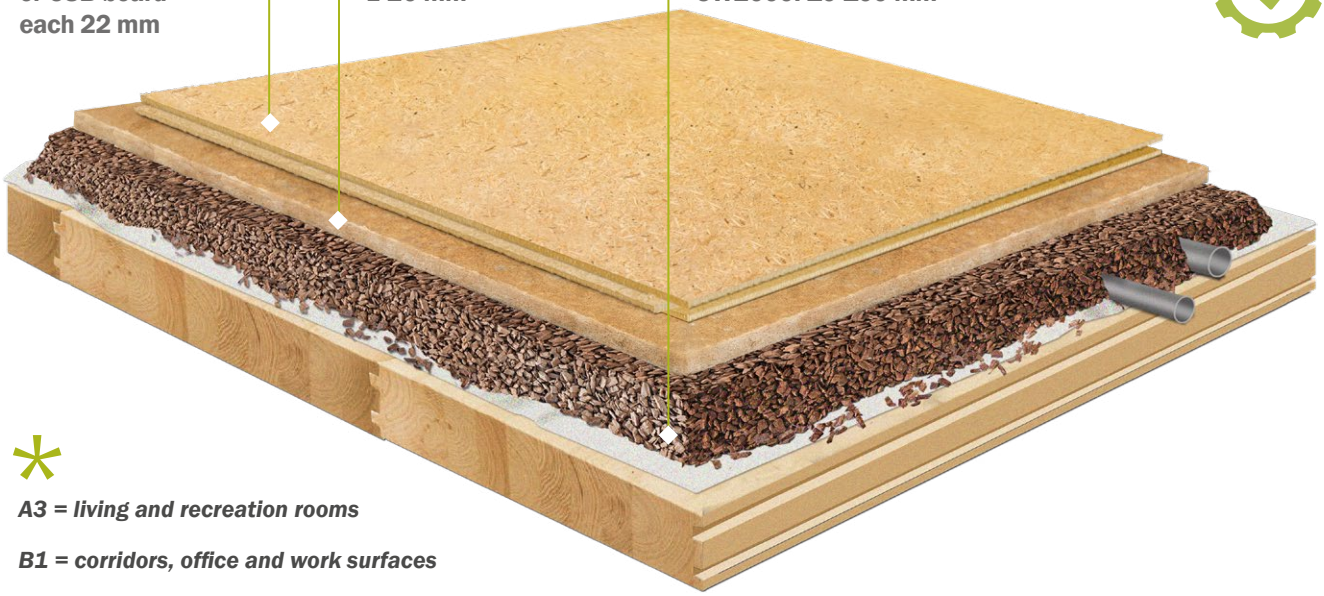
* ***C3/D2 =Hotels, schools, playschools and others***
in accordance with DIN 1055

Example construction with AMROC cement-board

CEMENT PARTICLE BOARD	COMPONENTS	DRY FILL	USAGE CLASS
AMROC 18 mm	Wood fibre board ≤ 20 mm	CW1000: 10 - 60 mm CW2000: 10 - 100 mm	A3*
AMROC 22 mm	Wood fibre board ≤ 20 mm	CW1000: 10 - 60 mm CW2000: 10 - 100 mm	A3*, B1*

Example with chipboard

CHIPBOARD	COMPONENTS	DRY FILL	USAGE CLASS
ESB board or OSB board each 22 mm	Wood fibre board ≤ 20 mm	CW1000: 10-60 mm CW2000: 10-100 mm	A3*



*

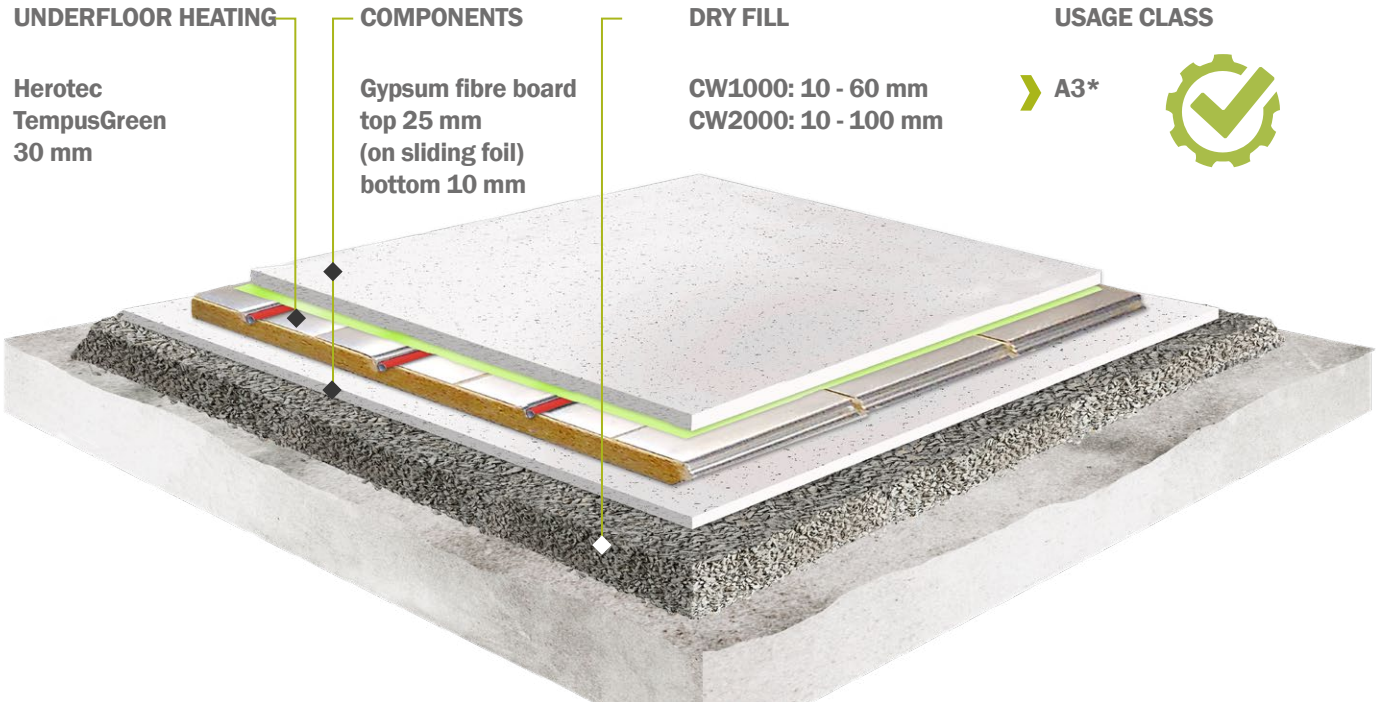
A3 = living and recreation rooms

B1 = corridors, office and work surfaces

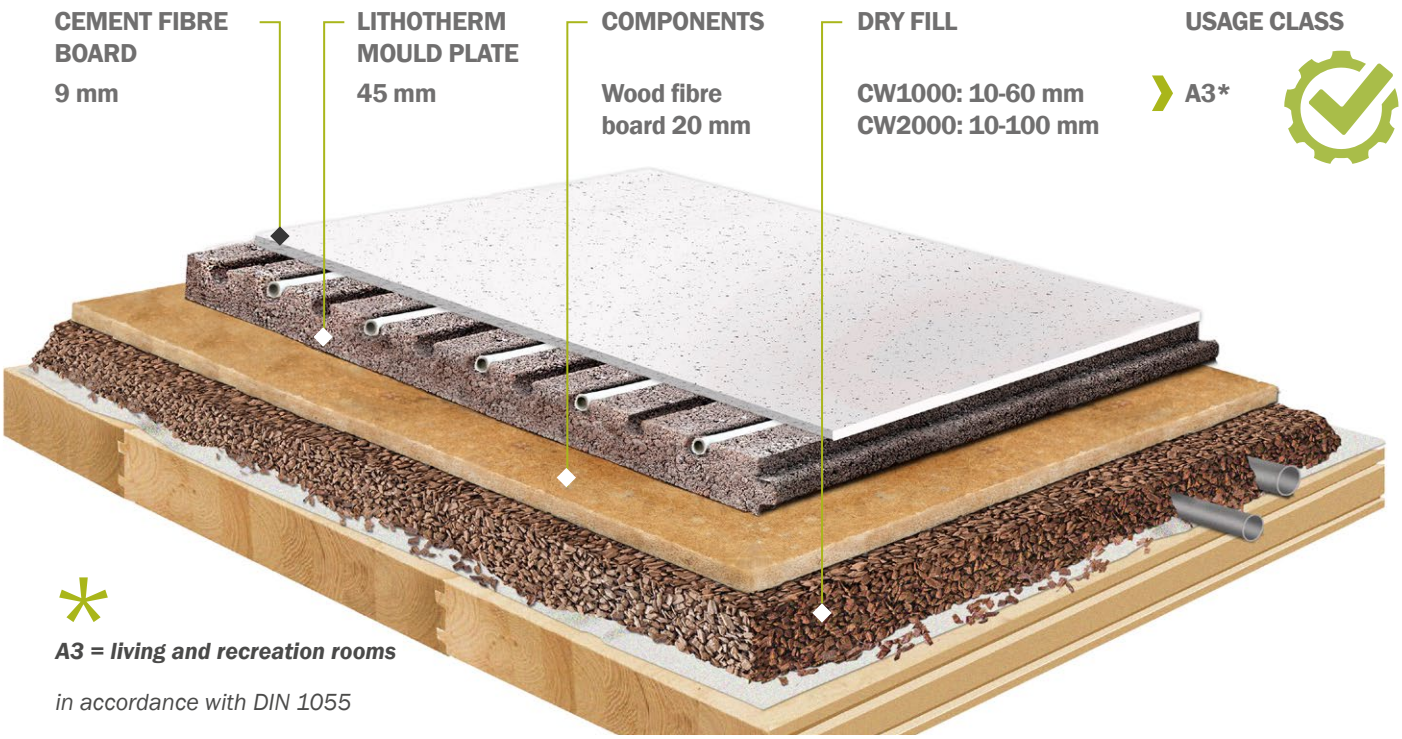
in accordance with DIN 1055

4.2.3 Superstructure with underfloor heating

Example with Fermacell dry screed



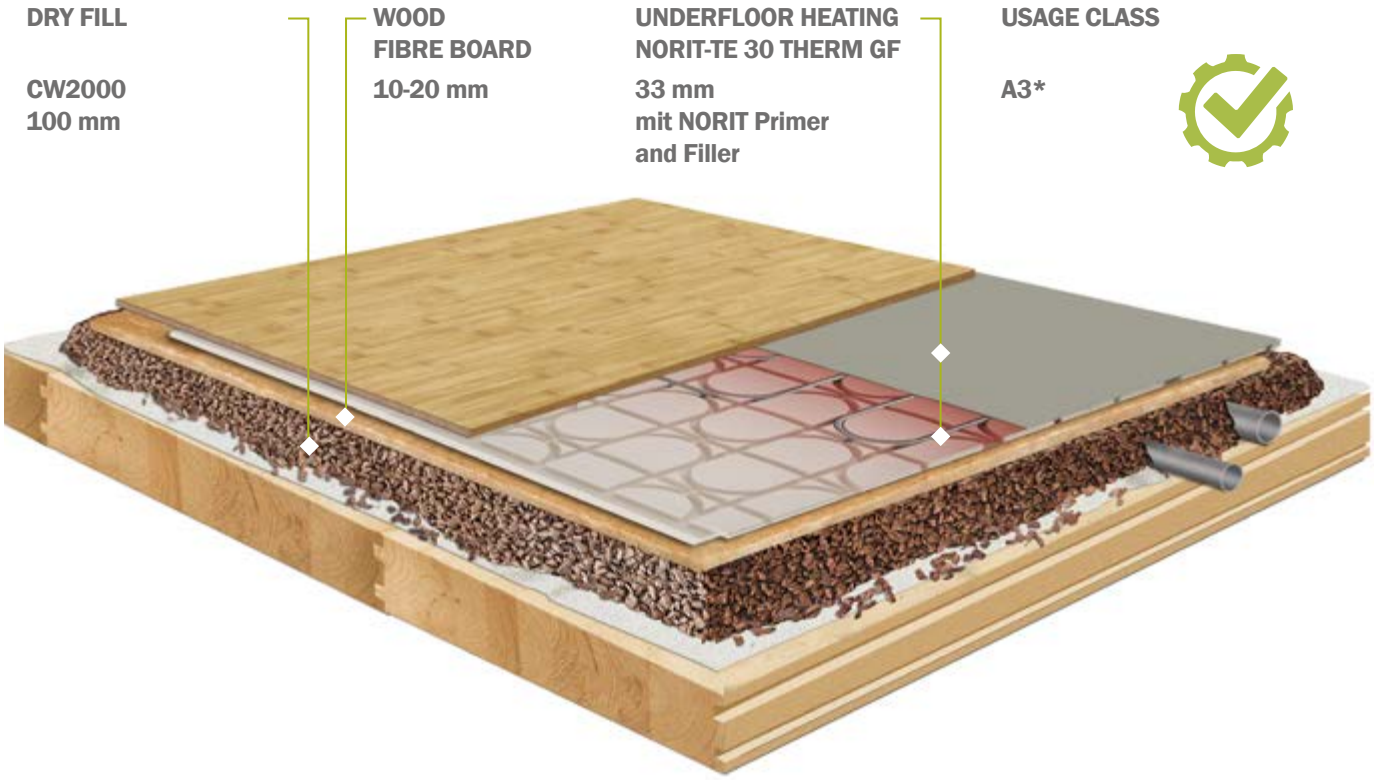
Example with soft wood fibre board



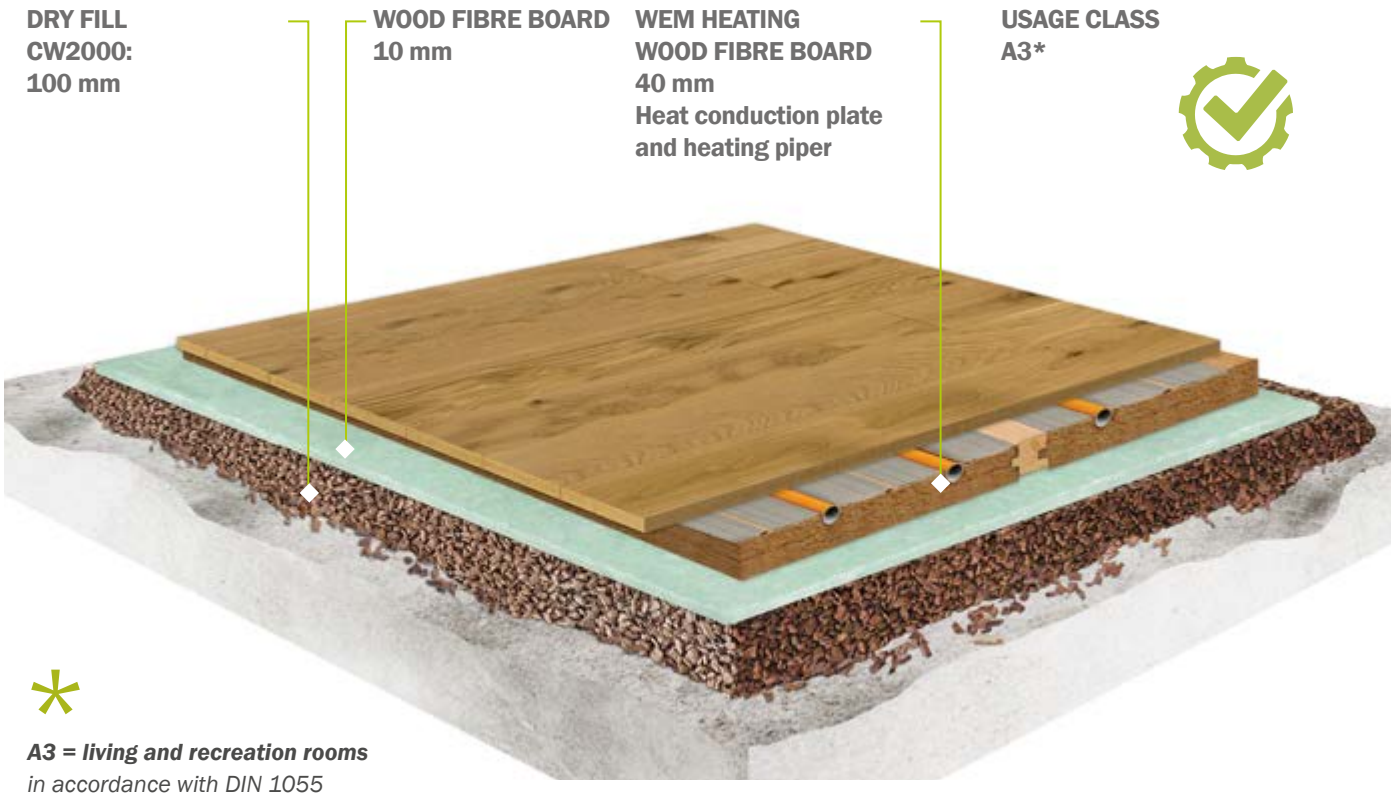
* ***A3 = living and recreation rooms***

in accordance with DIN 1055

Example with underfloor heating (Norit)



Floor construction with WEM



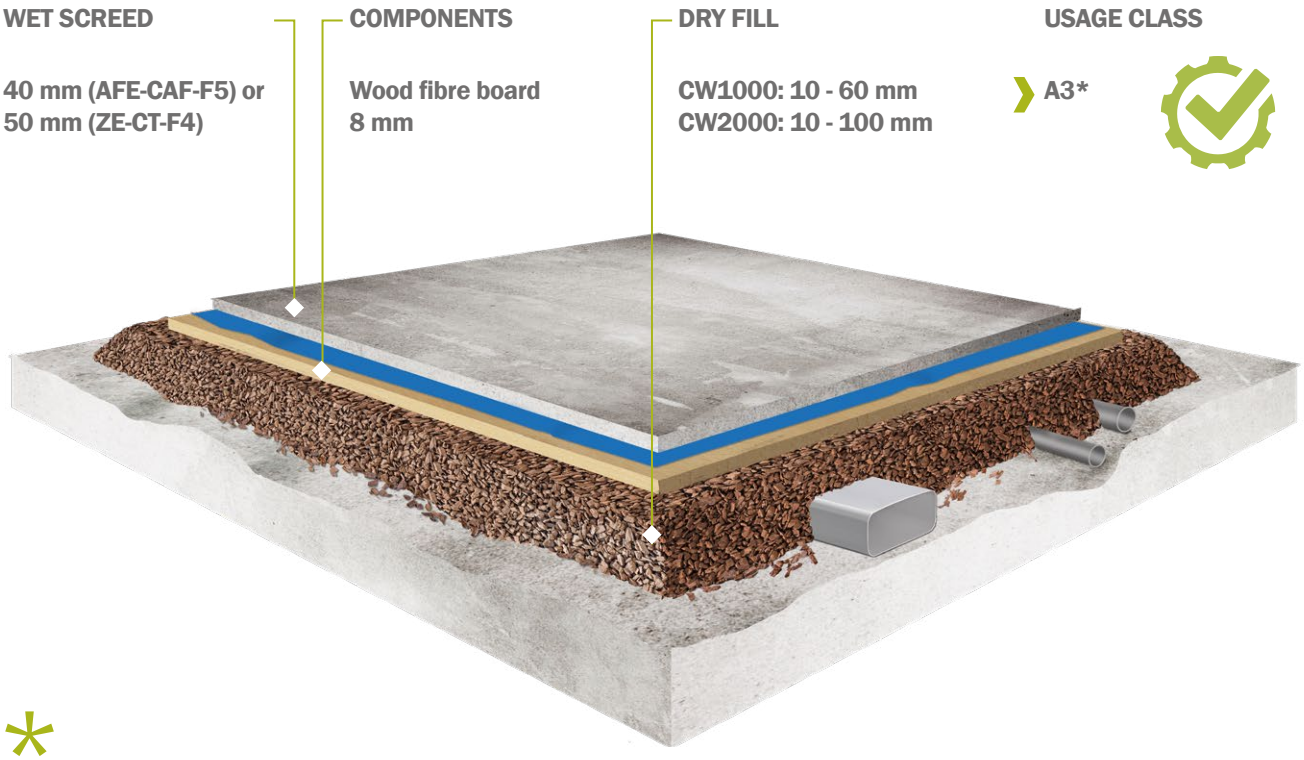
*

A3 = living and recreation rooms
in accordance with DIN 1055

4.3. SUPERSTRUCTURES WITH WET SCREED

In principle, classic wet screeds are suitable for all applications. They are robust and can accommodate all types of end coverings. Large areas can be created quickly in a plastic or flowable form. The following drying times depend on the type of screed, the installed screed thickness and the respective structural conditions. Before applying the end coating, the maturity of the sample must be checked by determining residual screed moisture.

4.3.1 Superstructures with wet screed



A3 = living and recreation rooms

in accordance with DIN 1055

4.3.2 Superstructure with heating screed

HEATING SCREED

60 mm (AFE-CAF-F5) or
70 mm (ZE-CT-F4)

COMPONENTS

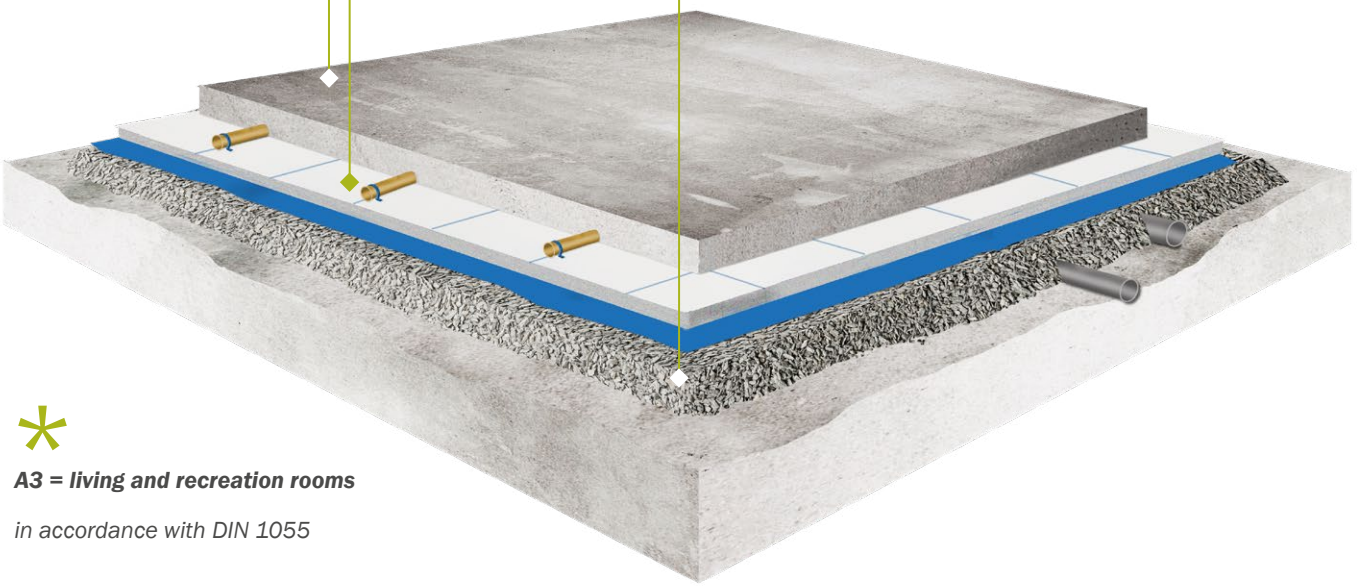
Tacker panels
≥ 20 mm

DRY FILL

CW1000: 10 - 60 mm
CW2000: 10 - 100 mm

USAGE CLASS

› A3*



*

A3 = living and recreation rooms

in accordance with DIN 1055

4.4 IMPACT SOUND

You can't see them - but you hear them: the impact sound of footsteps. Suitable measures against impact sound significantly increase living comfort. Impact sound is often a problem, especially for lightweight ceiling constructions.
By using superstructures in conjunction with CEMWOOD levelling fill, floor structures can be created that reliably reduce impact sound from the outset.

4.4.1 Impact sound on heavyweight cover slabs

MATERIAL	INSTALLATION HEIGHT [mm]	MASS [kg/m²]
Dry screed element	25	25
Wood fibre board	8	2
CW2000 levelling fill	100	38
total	**133**	**70**

determined impact sound reduction	ΔL_w [db]	20*
determined sound insulation measure	ΔR_w [db]	12*

**Test on a lightweight ceiling C1 according to DIN EN ISO 10140-5. The Δ Rw value is given without taking into account the sound reduction index of the wooden beam ceiling and the reinforced concrete ceiling.*

Note: All superstructures were measured in the laboratory/test according to valid European standards and can not be transferred to the respective site situation without being evaluated. Liability claims against CEMWOOD can not be derived from this document.

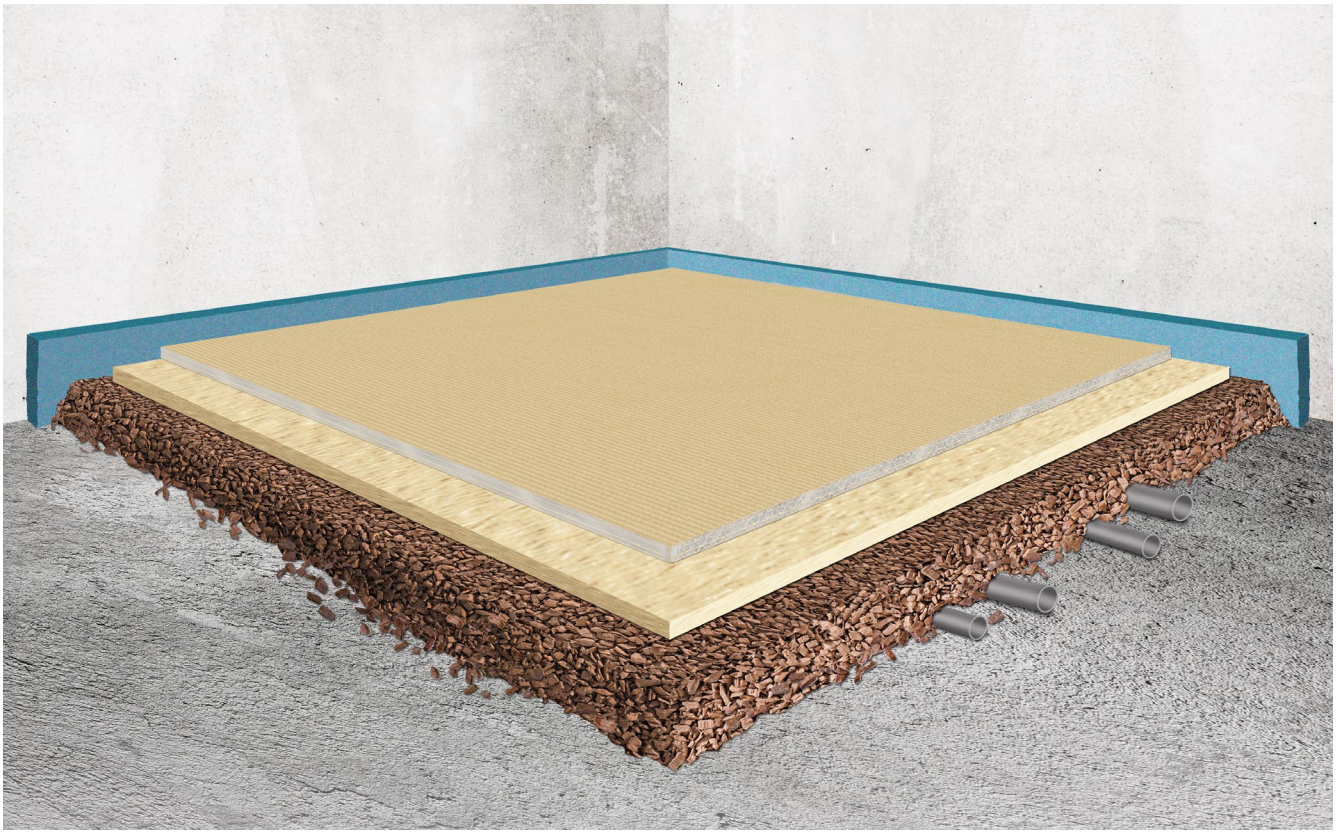
4.4.2 Impact sound on lightweight cover slabs

MATERIAL	INSTALLATION HEIGHT [mm]	MASS [kg/m²]
cement screed	50	120
Wood fibre board	40	3,5
CW2000 levelling fill	100	38
LEMIX Balast Clay Plate	40	81
Trickle protection	3	0,5
wooden ceiling	140	61
total	**375**	**304**

determined impact sound reduction	ΔL_w [db]	46
determined sound insulation measure	R_w [db]	72

Note: All superstructures were measured in the laboratory/test according to valid European standards and can not be transferred to the respective site situation without being evaluated. Liability claims against CEMWOOD can not be derived from this document.

4.4.2 Impact sound on heavy cover slabs



MATERIAL	INSTALLATION HEIGHT [mm]		MASS [kg/m²]
Dry screed element	25	29	
Wood fibre board	20	5	
CW2000 levelling fill	70	26	
total	**115**	**58**	

determined impact sound reduction	ΔL_w [db]	27*
determined sound insulation measure	ΔR_w [db]	7*

**Test on a lightweight ceiling C1 according to DIN EN ISO 10140-5. The Δ Rw value is given without taking into account the sound reduction index of the wooden beam ceiling and the reinforced concrete ceiling.*

Note: All superstructures were measured in the laboratory/test according to valid European standards and can not be transferred to the respective site situation without being evaluated. Liability claims against CEMWOOD can not be derived from this document.

4.5 Overview of impact sound measurements

The original reports can be requested from CEMWOOD: info@CEMWOOD.de

Test on a lightweight ceiling C1 according to DIN EN ISO 10140-5

Test Institute	fill used	Installa-tion height	additional layers (from bottom to top)	Installation height	measured Impact sound reduction
MPA Braunschweig	CW1000	50 mm	Wood fibre board Screed element	8 mm 25 mm	**16 dB**
	CW2000	50 mm	Wood fibre board Screed element	8 mm 25 mm	**17 dB**
	CW2000	100 mm	Wood fibre board Screed element	8 mm 25 mm	**20 dB**
	CW2000	45 mm	Wood fibre board Screed element Lithotherm mould plate Prefabricated parquet made of non-woven material	8 mm 25 mm 45 mm 15 mm	**24 dB**
	CW1000	50 mm	Wood fibre board Lithotherm mould plate Ceramic tiling	2x25 mm 45 mm 8 mm	**19 dB**
	CW1000	50 mm	Wood fibre board Lithotherm mould plate Prefabricated parquet made of non-woven material	2x25 mm 45 mm 15 mm	**25 dB**
	CW2000	70 mm	Wood fibre board Lithotherm mould plate Prefabricated parquet made of non-woven material	25 mm 45 mm 15 mm	**24 dB**

Test on solid ceiling according to DIN EN ISO 10140-5 Annex C.2 (140 mm reinforced concrete)

Test Institute	fill used	Installa-tion height	additional layers (from bottom to top)	Installation height	measured impact sound reduction
MPA Leipzig	CW2000	70 mm	Wood fibre board Screed element	20 mm 25 mm	**27 dB**
	CW2000	70 mm	Wood fibre board Sound insulating board	20 mm 2x10 mm	**28 dB**
	CW2000	70 mm	Wood fibre board Sound insulating boards	20 mm 15 mm	**30 dB**
	CW2000	70 mm	Screed element	25 mm	**24 dB**

Test on solid wooden ceiling 215 mm (4-layer/dowelled)

Test Institute	fill used	Installa-tion height	additional layers (from bottom to top)	Installation height	measured Impact sound reduction
ift Rosenheim	CW2000	65 mm	Wood fibre board Lithotherm mould plate Bolted floorboard	2x25 mm 45 mm 24 mm	**29 dB**
	CW2000	65 mm	Wood fibre board btf silent layer mat Sound insulating boards Lithotherm mould plate Bolted floorboard	2x25 mm 3 mm 15 mm 45 mm 24 mm	**34 dB**
	CW2000	65 mm	Wood fibre board Screed element Sound insulating board Lithotherm mould plate Bolted floorboard	30 mm 25 mm 15 mm 45 mm 24 mm	**34 dB**
	CW2000	65 mm	Mineral fibre plate Cement screed	40 mm 50 mm	**38 dB**

Test on board pile ceiling 140 mm

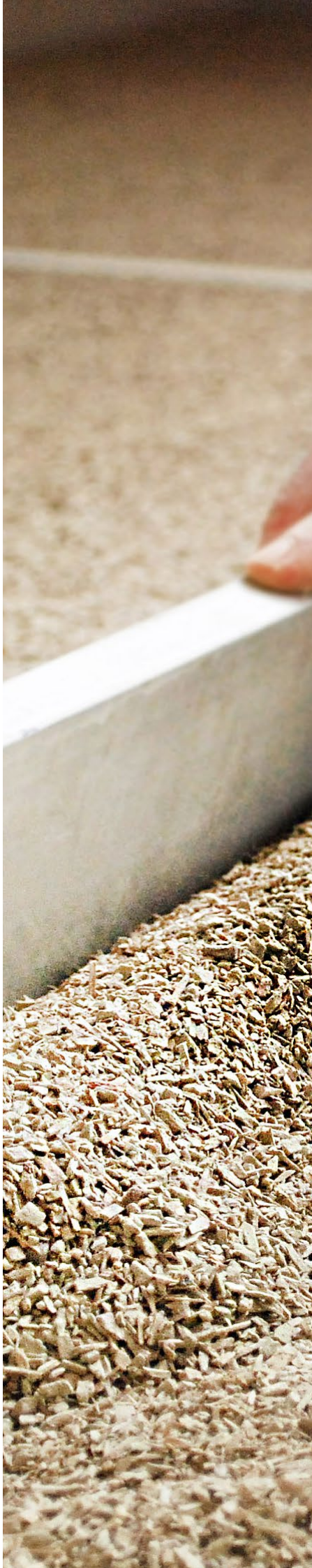
Test Institute	fill used	Installa-tion height	additional layers (from bottom to top)	Installation height	measured Impact sound reduction
ift Rosenheim	CW2000	75 mm	Screed element	25 mm	**22 dB**
	CW2000	75 mm	Wood fibre board Screed element	20 mm 15 mm	**26 dB**
	CW2000	100 mm	Cement creed LEMIX Balast Clay plate	50 mm 40 mm	**46 dB**

Test on wood-concrete composite ceilings 235 mm (155 mm / 80 mm)

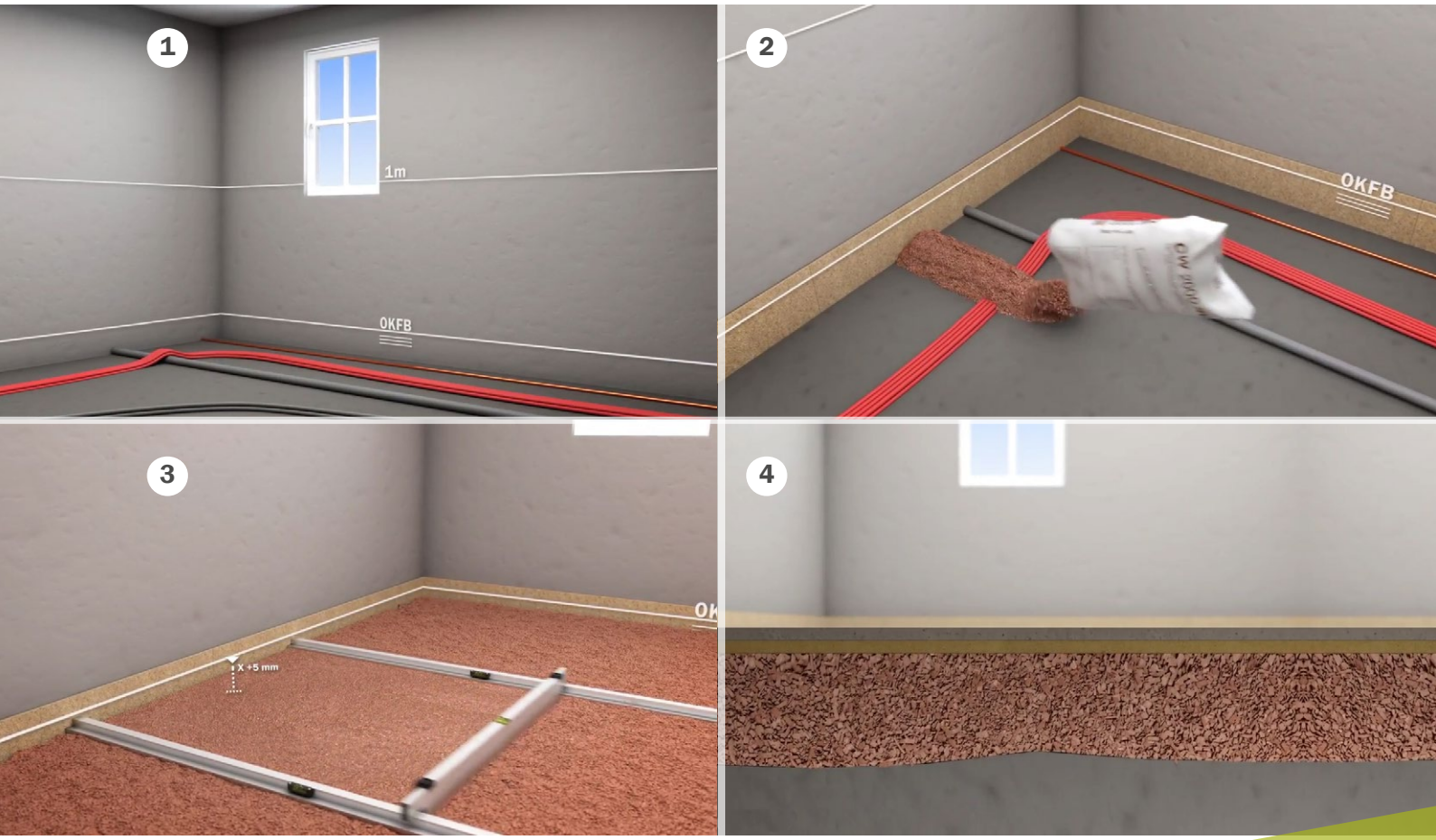
Test Institute	fill used	Installa-tion height	additional layers (from bottom to top)	Installation height	measured Impact sound reduction
ift Rosenheim	CW2000	60 mm	Wood fibre board Lithotherm mould plate Bolted floorboard	30 mm 45 mm 24 mm	**31 dB**
	CW2000	60 mm	Mineral fibre plate Cement screed	40 mm 50 mm	**41 dB**

5

PROCESSING INSTRUCTIONS



5.1 ADD, TROWEL, DONE.



CAUTION: The pictures represent the working method and are not installation instructions. These can be found on the product packaging and on our homepage. www.CEMWOOD.de

VALID FOR CW1000, CW2000 and CW3000

1. Set height
2. Add fill
3. Trowel fill
4. Lay the load-distributing layer and the floor covering
   (Fill can be loaded immediately)

5.1 PROCESSING INSTRUCTIONS FOR CW1000, CW2000 UND CW3000 AS LEVELLING FILLS

Video at:
www.cemwood.de/service/videos/

1. PREPARATION

- Specify fill heights
- Apply edge insulation strips and, if necessary, drip protection
- If necessary, install a moisture barrier
- Overlapping of installations: at least 10 mm

2. PROCESSING

- Using a levelling bar or device, trowel the fill to 5 mm
- Trowel the fill according to the height of the levelling bar or device and then press in with a trowel
- Fill can be used immediately - structure systems can be laid
- when using Granubot levelling device, observe the processing instructions

PROCESSING INSTRUCTIONS CW1000 AS CAVITY FILLING

- Lay supply lines in ceilings and walls and secure
- For installation openings in ceilings and walls, apply drip protection if necessary
- Observe the requirements of the component; if necessary, consult our department Tech. Advice. The contact details can be found on the last page of the folder

5.2 PROCESSING INSTRUCTIONS LEVELLING AND EQUALISING FILL CW020

1. PREPARATION

- Specify fill heights
- Apply edge insulation strips and, if necessary, drip protection

2. PROCESSING

- Fill in unevenness and remove the fill with the guideline
- If necessary, lightly press with trowel
- Lay the area with thin-layered fibreboard
- Build screed systems

5.3 PROCESSING INSTRUCTIONS GaLa DEKO STIXX

1. PREPARATION

- Determine surface
- Specify installation height (recommended 5 - 10 cm)

2. PROCESSING

- use tool to bring to desired height

5.4 PROCESSING INSTRUCTIONS CW EcoFix

APPLICATION A: SURFACE SPRAYING

CW EcoFix can be sprayed onto an already inserted and levelled CW2000 levelling fill. This solidifies the fill in the surface area with a penetration depth of about 15 mm.

- Pour CW EcoFix undiluted into a commercially available pressure sprayer (operating pressure 3 bar).
- Evenly spray onto the levelling fill with the CW EcoFix pressure sprayer.
- This should achieve a material volume of 1.5 l/m².
- Ensure adequate drying. The use of warm air accelerates the hardening process.
- After about 12 hours, the solidified fill can be loaded.
- Do not cover the bedding by building up layers until at least 24 hours later, but make sure it is not completely dry.

APPLICATION B: MAKE A SOLIDIFIED FILL

CW EcoFix can be blended with mineralised CW2000 wood chips to produce a solidified dill. This creates a highly loadable fill for heavily used floor areas.

- Place one sack of CW2000 (50 l) in a sufficiently large container (for example 80 l mortar bladder).
- Add one can of CW EcoFix (5 l) and mix thoroughly with a stirrer.
- Add and level the damp material quickly.
- Ensure adequate drying. The use of warm air accelerates the hardening process.
- After about 24 hours, the solidified fill can be loaded.
- Do not cover the bedding by building up layers until at least 48 hours later, but make sure it is not completely dry.

» *back to the table of contents*

5.5 SAFETY INSTRUCTIONS

1. NAME OF THE SUBSTANCE / PREPARATION AND COMPANY
Product details Trade name: CW020, CW1000, CW2000, CW3000, GaLa DEKO STIXX Use of the substance / preparation: Dry fill, wood chips with mineral coating Manufacturer / supplier: CEMWOOD GmbH Glindenberger Weg 13, 39126 Magdeburg Division providing information: Technology department ksg@cemwood.de Emergency information: Emergency no. 112
2. POSSIBLE HAZARDS
Hazard name: N/A Special hazard warnings for people and the environment: this product is not subject to a labelling requirement
3. COMPOSITION / DETAILS OF COMPONENTS
Chemical characterisation Description: Wood chips with mineral coating Hazardous ingredients: -
4. FIRST AID MEASURES
General instructions: Self-protection of the first aider Remove casualty from the danger area After inhaling: Fresh air supply, consult doctor immediately with any symptoms After skin contact: This product is generally not skin-irritant After eye contact: Rinse the eyes under running water; visit a doctor if there is no improvement After swallowing: Consult a doctor
5. FIRE-FIGHTING MEASURES
Suitable solvents: Adopt fire-fighting measures that suit the environment Special protective equipment: No special measures required
6. MEASURES IN EVENT OF UNCONTROLLED RELEASE
Personal precautions: Avoid dust formation Environmental precautions: Do not allow to get into sewer system, groundwater, surface water Procedure for cleaning / pick-up: Pick up material by mechanical means and dispose of as prescribed
7. HANDLING AND STORAGE
Handling Instructions for safe handling: Avoid cement dust formation, follow BG information “Mineral dust” (BGI 5047) Instructions for fire and explosion protection: No special instructions required Storage Requirement for storage areas and containers: Only store unopened Instructions for combined storage: Store separately from foodstuffs Further specifications for the storage conditions: Store in a dry and closed space

5 Safety Instructions

8. LIMITATION AND MONITORING OF EXPOSURE / PERSONAL PROTECTIVE EQUIPMENT
Additional instructions on the design of technical facilities: No specification Components with workplace-related limits to be monitored: General dust limit (2.4 TRGS 900) Personal protective equipment General protection and hygiene measures: Wash hands before breaks and when finishing work, keep away from food, avoid contact with eyes and skin Breathing protection: Filter P2 Hand protection: Protective gloves as per EN 374 recommended Glove material: - Penetration time of the glove material: - Eye protection: Safety goggles (EN 166:2001) recommended when pouring Body protection: Work clothing
9. PHYSICAL AND CHEMICAL PROPERTIES
General information Shape: Cubic, elongated Colour: Various Odour: None Change of state: - Melting point / melting range: - Flashpoint: No (B2) Ignition temperature: None Spontaneous ignition: No Risk of explosion: No Bulk density: 300 - 370 kg/m³ Solubility / miscibility in water: No
10. STABILITY AND REACTIVITY
Thermal decomposition / conditions to be avoided: None Dangerous reactions: None Hazardous decomposition products: No
11. TOXICOLOGY DATA
Acute toxicity: No Primary irritant effect On the skin: None On the eye: No dangerous irritation known
12. ENVIRONMENT-SPECIFIC DATA
General information: Generally not hazardous to water
13. DISPOSAL INSTRUCTIONS
Product Recommendation: Residues are to be disposed of as building debris Waste disposal code: 10 13 11 Uncleaned packaging: Packaging is collected by Interseroh (No. 210557)

5 Safety Instructions

14. TRANSPORT DATA
Overland transport ADR/RID and GGVSE (cross-border / inland) ADR/RID GGVSE Class: - Sea transport IMDG/GGVSea: - IMDG/GGVSea Class: - Air transport ICAO-TI and IATA-DGR: - ICAO/IATA Class: - Transport / further details: Not hazardous goods
15. INFORMATION ON LEGAL REGULATIONS
Labelling according to EEC guidelines: Not subject to a labelling requirement National regulations: - Hazardous Incident Ordinance: - Water hazard class: -
16. OTHER INFORMATION
Division issuing data sheet: Technical Consulting department Contact person: Karsten Schrang (ksg@cemwood.de)

6

TENDER DOCUMENTS

6.1 CW1000
6.2 CW2000
6.3 CW020

ALL DOCUMENTS CAN BE FOUND AT

www.heinze.de/at-manager

6.1 CW1000

01 Installation CW1000 Levelling fill

Item 001 01.0001 CEMWOOD Levelling fill CW1000

Levelling fill for height and level adjustment

Delivery and installation of CEMWOOD CW1000 levelling fill made of dried mineral-coated wood chips to create the required height and levelling on wooden beams, solid wood, wood/concrete composites and solid ceilings as well as on floors.

Delivery of levelling material and installation according to the manufacturer's instructions.

Installation height: 10 - 60 mm
Grain size: 1 - 5 mm
Fill density: approx. 340 kg/m³
Compressive stress (at 10% compression according to DIN EN 826): 600 kPa
Fire behaviour according to DIN EN 13501: Bfl-S1
Thermal conductivity: Nominal value 0.07 W/mK, rated value 0.11W/mK

Product/system: Levelling fill CEMWOOD CW 1000 or glw.

AMOUNT: ..... UNIT: m³ EP: ..... GP: .....

6.2 CW2000

01 Installation CW2000 Levelling fill

Item 001 01.0001 CEMWOOD Levelling fill CW2000

Levelling fill for height and level adjustment

Delivery and installation of CEMWOOD CW2000 levelling fill made of dried mineral-coated wood chips to create the required height and levelling on wooden beams, solid wood, wood/concrete composites and solid ceilings as well as on floors.

Delivery of levelling material and installation according to the manufacturer's instructions.

Installation height: 10 - 200 mm
Grain size: up to approx. 4 - 8 mm
Fill density: approx. 360kg/m³
Compressive stress (at 10% compression according to DIN EN 826): 600 kPa
Fire behaviour according to DIN EN 13501: Bfl-S1
Thermal conductivity: Nominal value 0.08 W/mK, rated value 0.11W/mK

Product/system: Levelling fill CEMWOOD CW2000 or glw.

AMOUNT: ..... UNIT: m³ EP: ..... GP: .....

6.3 CW020

01 Installation CW020

Item 001 Drip protection

Delivery and installation of a drip protection layer according to the manufacturer's instructions on an existing plank floor

Manufacturer: .....

AMOUNT: ..... UNIT: m³ EP: ..... GP: .....

Item 002 Edge insulation strips

Delivery and installation of an edge insulation strip according to manufacturer information about the total height of the
floor structure

Manufacturer: .....
Width .....mm
Building material class: .....according to DIN 4102

AMOUNT: ..... UNIT: lfdm EP: ..... GP: .....

Item 003 Levelling and equalising fill CW020

Levelling fill for height and level compensation up to 20 mm

Delivery and installation of CEMWOOD levelling and equalising fill CW020 of dried mineral coated wood chips to create the required height and level compensation on solid,wood beams, solid wood and wood concrete composite ceilings.

Delivery and installation of levelling and equalising fill according to the manufacturer's instructions.

Installation height: 0 - 20 mm
Grain size: 1 - 4 mm
Fill density: approx. 320 kg/m³
Compressive stress (uncompressed): 500 kPa
Fire behaviour according to DIN EN 13501: Bfl-S1
Thermal conductivity: Nominal value 0.06 W/mK

Product/system: Levelling and equalising fill CEMWOOD CW020 or glw.

AMOUNT: ..... UNIT: m³ EP: ..... GP: .....

Item 004 Load-distributing layer

Delivery and full-surface laying of a load-comparing and impact sound insulating layer (single or multi-layer) consisting of wood fibre boards acc. manufacturer's instructions.
Manufacturer: .....
Name/Type: .....
Board thickness: ..... mm
Number of layers: .....
Area load: .....kg/m²
Pressure stress: .....kPa
Dyn. E-Modulus: .....MN/m³
Building material class: .....according to DIN4102

Installation height (total): ..... mm

AMOUNT: ..... UNIT: m² EP: ..... GP: .....

Item 005 Additional impact sound insulation
Delivery and installation of a special layer to improve the impact sound insulation of the structure (single or multi-layer) acc. manufacturer's instructions

Manufacturer: .....
Name/Type: .....
Board thickness: ..... mm
Number of layers: .....
Area load: .....kg/m²
Pressure stress: .....kPa
Dyn. E-Modulus: .....MN/m³
Building class: .....according to DIN 4102

Installation height (total): ..... mm

AMOUNT: ..... UNIT: m² EP: ..... GP: .....

Item 006 Dry screed

Delivery and installation of dry screed elements acc. manufacturer's information (single or multi-layered) including the required blanks and ancillary work

Manufacturer: .....
Thickness: ..... mm
Number of layers: ..... Area load: .....kg/m²
Building material class: .....according to DIN 4102

Installation height (total): .....mm

AMOUNT: ..... UNIT: m² EP: ..... GP: .....

› back to the table of contents

7

TESTS AND CERTIFICATES

7.1 CEMWOOD Full declaration of ingredients of

CW1000®, CW2000®, CW3000®, CW020®, GaLa DEKO STIXX®

The following ingredients are contained in mineral-coated wood chips from CEMWOOD GmbH:

Softwood	**ca. 70 M.-%**
Calcium silicate hydrate	**ca. 20 M.-%**
Calcium carbonate	**ca. 5 M.-%**
Calcium aluminate	**<5 M.-%**
Iron oxide *	**<5 M.-%**

* only for CW020 und CW2000

7.2 OVERVIEW OF CEMWOOD FILLS TECHNICAL FEA-

		CW1000	CW2000	CW020	CW3000
Chip size	mm	1 - 5	4 - 8	1 - 4	5 - 10
Fill density	kg/m³	approx.	approx.	approx.	approx.
Compressive stress / com-	kPa	500-600			700
Thermal conductivity λ (10 °C,70°Ctr)	W/mK	0.07	0.08	0.07	0.085
Fire behaviour (DIN EN 13501-1)	-	B(fl) - S1			
Water vapour diffusion resistance μ	-	3			
Equivalent air layer thickness (Sd)	m	corresponds to 0.03 m per cm of fill height			
VOC test according to AgBB test	-	✓	✓	n.b.	n.b.*
dynamic stiffness (s` / 100 mm)	MN/m³	/	37	/	n.b.*
Resistance to mould and termites	-	✓			
Environmental Product Declaration EPD (DIN EN 15804)	-	✓			

* unspecified

7.3 TECHNICAL DATA SHEET CW EcoFix

PRODUCT DESCRIPTION:	**CW EcoFix**
CHARACTERISTICS:	**Aqueous styrene-acrylate dispersion, solvent and plasticiser free**
DELIVERY TYPE:	**5 litre canister** **22 % in water**
CORE INFORMATION:	
Non-volatile proportion	**22.0 +/- 1%**
Viscosity in mPas	**2 - 20**
pH value	**7.0 – 9.0**
Minimum film forming temperature	**approx. 3 °C**
Density in g/cm³	**approx. 1.03**

FEATURES AND APPLICATIONS:

CW EcoFix is a low emission, low odour styrene acrylate dispersion that contains no ammonia and no amines. The dispersion doesn't require solvents (film-forming agent) for filming. CW EcoFix is therefore particularly suitable for the natural bonding of mineralised wood chips. The dispersion is preserved. It is plasticiser and solvent-free and contains no free formaldehyde or formaldehyde-releasing products. It doesn't contain any alkylphenol ethoxylates (APEO).

STORAGE:

The dispersion should be stored in tightly sealed, corrosion-resistant containers **frost-free** and not in direct sunlight **at +5 to +25 °C** .

7.4 OVERVIEW OF PROFILES

The original reports can be requested from CEMWOOD: info@CEMWOOD.de

Test	Test object	Test institute	Date	Test result
Absorbing a surface load DIN 18560-2:2009	CW1000, CW2000 Mineralised wood chips	HFB Engineering, Leipzig	05.2012	With a surface load of 5 kN/m², over a period of four weeks an average compressibility of 0.3 mm was determined for CW2000 and of 0.4 mm for CW1000.
Fire rating according to DIN EN 13501-1:2010-01	CW1000, CW2000 Mineralised wood chips	MPA Dresden	11.2017	B_{fl}-S1 (B1)
EPD Environmental Product Declaration DIN EN ISO 14025 EN 15804	CW1000, CW2000, CW3000, CW020 Mineralised wood chips	ift Rosenheim	06.2018	Environmental impact, life cycle A1-A3 (extract) - Global warming potential GWP [kgCO2 equiv.]: -94.8 - Use of non-renewable primary energy [MJ]: 883 - Use of renewable primary energy [MJ]: 2140
VOC according to AgBB	CW1000, CW2000 Mineralised wood chips	Wessling, Altenberge	03.2017	The products examined meet the requirements of the AgBB test scheme and the requirements of Sentinel Haus Institut
VOC according to AgBB	CW EcoFix	Institut f. Lacke und Farben, Magdeburg	03.2016	VOC content 968 mg/kg, therefore < 0.1%
Acoustic tests according to DIN EN ISO 10140	CW1000, CW2000 Mineralised wood chips	ift Rosenheim MPA Braunschweig MPA Leipzig	Constantly supplemented	Individual verification on request
Dynamic stiffness based on DIN EN 29052-1	Mineralised wood chips	MFPA Leipzig	11.2015	s'_t = 37 MN/m³
Elutable components according to DüMV	GaLa DekoStixx Mineralised wood chips	LUFA Nordwest	11.2015	The emissions limits as per Annex 2 DüMV were complied with.
Mould growth Test according to EN 60068-2-10 Environmental influences	Mineralised wood chips	MPA Eberswalde	03.2011	Assessment according to EN: After four weeks, no mould growth was discernible with 50x magnification
Resistance to rot Test according to DIN EN 113:1996	Mineralised wood chips	Federal Institute for Materials Research and Testing (BAM)	02.2011	No relevant loss of mass after 16 weeks of incubation with test fungi
Resistance to termite infestation BAM laboratory procedure based on DIN EN 117:2005	Mineralised wood chips	Federal Institute for Materials Research and Testing (BAM)	06.2011	The mineralised wood chips display high mortality to the termite type *Coptotermes formosanus.* A complete killing effect arose.

8

CONTACT, SALES AND TECH. ADVICE

8 Contact, Sales and Tech. Advice

CONTACT
CEMWOOD GmbH
Glindenberger Weg 13
D-39126 Magdeburg
Tel.: +49 (0)391 810 560-0
Fax.: +49 (0)391 810 560-29
info@cemwood.de

MANAGING DIRECTOR
Marc Müller
Tel.: +49 (0)391 810 560-02
mm@cemwood.de

SALES MANAGER
Andreas Grupe
Sales Manager
Mob.: +49 (0)151 598 250 32
ag@cemwood.de

SALES DEPARTMENT
Franz Bender
Sales and Marketing
Tel.: +49 (0)391 810 560-01
fb@cemwood.de

TECH. ADVICE
Karsten Schrang
Head of Research and Development
Tel.: + 49 (0)391 810 560-05
ksg@cemwood.de

SENTINEL HAUS INSTITUT

CEMWOOD

Mineralisch ummantelte Holzspäne

www.cemwood.de