ThermoWhite®

System

White is right - the better insulation

CE ETA-17/0407 Europäische Technische Bewertung für / European Technical Assessment for

CE ETA-12/0428 Europäische Technische Bewertung für / European Technical Assessment for

CE ETA-17/0408 Europäische Technische Bewertung für / European Technical Assessment for

www.thermowhite.com

VORTEILE

ThermoWhite® System

ThermoWhite-Advantages at a glance:

- Nationwide supply in Austria, Germany and parts of Europe by Thermowhite partners
- Fast, flexible and on-time customer support
- Standardized processing according to standards ETA-17/0407, ETA-12/0428 und ETA-17/0408
- Factory quality control and external monitoring (BVFS, OFI, OIB)
- High installation performance and low demand for binder
- No cutting of panels required – great time-saving
- Excellent thermal insulation
- Excellent footstep sound insulation, reduction of 23 dB, in system with Thermowhite PE 5/300 up to 32 dB
- Jointless installation
- High load capacity
- Quick, clean and space-saving installation
- Can be installed on sloped roofs, ideal for flat roofs (Speed UP)
- Ideal for floor heating systems
- High installation thicknesses possible
- After 12 hours ready for laying with Thermowhite Speed Up
- Full recyclable

Most important technical data:

Nominal value of the thermal conductivity

- **WD 100 R** — **λ10 dry,90/90 0,046 W/mK**
- **WD 130 R** — **λ10 dry,90/90 0,0550 W/mK**
- **WD 70 R** — **λ10 dry,90/90 0,0444 W/mK**

Compressive stress at 10% compression

- **WD 100 R** — **70 kPa**
- **WD 130 R** — **80 kPa**
- **WD 70 R** — **80 kPa**

Traffic load

- **WD 100 R** — **10 kN/m²**
- **WD 130 R** — **16 kN/m²**
- **WD 70 R** — **16 kN/m²**

Creep behaviour 10 y.:

- **WD 100 R** — **CC ≤ 1,5%**
- **WD 130 R** — **CC ≤ 1,2%**
- **WD 70 R** — **CC ≤ 1,2%**

Readiness for laying after (CM Measurement) ≤12 CM-%

- **All WD products** — **Depending on the installation thickness 2-4 days, depending on temperature and humidity**
- **Speed Up** — **ready for laying after 12 hours**
- **All WD products** — **Compensation moisture content** — **(According ONORM / EN 12429) 5,5 M%**
- **All WD products** — **water vapour diffusion resistance** — **at 3 cm μ ≤ 6 m**

Fire behaviour

- **All Products** — **Euroclass E**

CE ETA-17/0407 CE ETA-12/0428 CE ETA-17/0408

Further information and data sheets are available on **www.thermowhite.com**

CERTIFICATES

ThermoWhite®-products comply with the strictest European quality standards. In order to make use of housing subsidies, norm-compliant products are a basic prerequisite.

Unique guarantee of quality control

- **European technical assessment (ETA-17/0407, ETA-12/0428, ETA-17/0408)**
  for thermal- and/or airborne sound insulation

- **External supervision contract** BVFS Nr. 760 / BVFS Nr. 774

- **Tests for quality insurance according to required standards.**
  - Tests according to ETA-17/0407, ETA-12/0428 and ETA-17/0408
  - Particle size group EPS ÖNORM - EN 933-1
  - Bulk density of EPS dry grout ÖNORM - EN 1097-3
  - Fresh mortar density ÖNORM - EN 12350-6
  - Thermal conductivity ÖNORM - EN 12667, ÖNORM B 6015-1 and -2
  - Dry bulk density ÖNORM - EN 1602
  - Compressive stress at 10% compression ÖNORM - EN 826
  - Creep behaviour ÖNORM - EN 1606
  - Deformation at defined pressure and temperature load. ÖNORM - EN 1605
  - Fire behaviour ÖNORM - EN 13501-1
  - Dynamic stiffness ÖNORM - EN29052-1

- **Factory production control system (WPK)**
  LD, FMD, DMD, particle size distribution EPS, weighing cell, filling quantity, dry mix, adding of water

- **Registered mix-mobile**
  Internal and external monitoring


urkunde
bvfs
nr.: 65501068


European Technical Assessment
ETA-17/0407 of 15.05.2017


European Technical Assessment
ETA-12/0428 of 15.05.2017


European Technical Assessment
ETA-17/0408 of 15.05.2017

CE ETA-17/0407 | CE ETA-12/0428 | CE ETA-17/0408

PRODUCTS

**There is a secret to easy living comfort:
The ThermoWhite System. The technology for optimal insulation. Because the right choice of the insulation material is crucial for room climate and acoustics.**

ThermoWhite WD 100 R

Mineral-bound thermal- and impact sound insulation for normal loads beneath screeds.

ThermoWhite WD 130 R

Mineral-bound thermal- and impact sound insulation for higher loads beneath screeds.

ThermoWhite WD 70 R (R/N)

Mineral-bound thermal- and impact sound insulation for normal and higher loads with improved insulation values.
Product expansion of WD 100 R with freshly foamed EPS granulate.

ThermoWhite WD 50 R

Mineral-bound thermal insulation fill for blow-in insulation.

ThermoWhite Speed Up

Dehydration accelerator for all ThermoWhite WD products

GEOCELL BLÄHGLAS

Geocall expanded glass

Mineral-bound expanded glass
Fire class A1 for special applications.

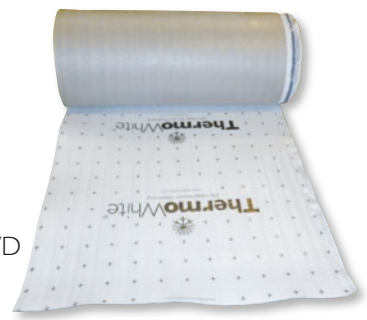
All WD products are available as ready-mix in 200 l bags

ThermoWhite PE-adhesive tape

ThermoWhite PE-impact sound vapour barrier

5 mm foam for impact sound with laminated vapour barrier and self-adhesive strips.

In the system with ThermoWhite WD products up to 32 db impact sound improvement.

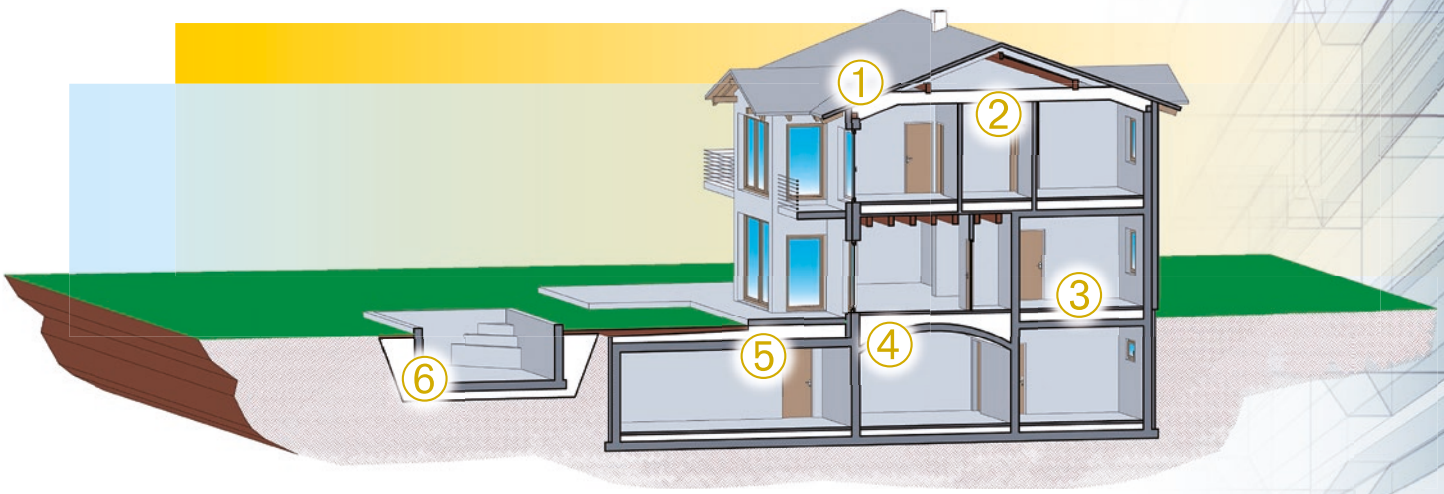


weniger CO_2

CE ETA-17/0407 | CE ETA-12/0428 | CE ETA-17/0408

Further information and data sheets are available on **www.thermowhite.com**

If you want to build providently, you should also place highest demands on energy efficiency. Increasing energy awareness is another important factor that is relevant to the ThermoWhite system. Optimal insulation not only saves heating energy in winter, but also energy from the use of air-conditioning systems in summer. This has a noticeable positive effect both on your wallet and the earth atmosphere respectively:



① STEEP ROOF

ThermoWhite is characterized by its excellent thermal insulation properties and dimensional stability.

No rear ventilation is required.

Important: Observe the vapour barrier!

Use open-diffusion sarking sheets!

② ATTIC

ThermoWhite is highly suitable for renovations.

ThermoWhite can be used as a base for any kind of screed or dry-element panels for accessible attics.

③ FLOORS

Sound and cold bridges are avoided by jointless installation; a horizontal underground for the heating screed is produced. The resulting continuous and same-thickness screed plate provides for a uniform floor heating temperature at the surface of the screed. It prevents different expansions and thus also crack initiation.

④ VAULTS

High installation thicknesses are no problem for ThermoWhite.

Thicknesses up to 50 cm or more can be inserted within a single work step.

At the same time, the load capacities for residential and commercial spaces are guaranteed.

⑤ FLAT ROOF

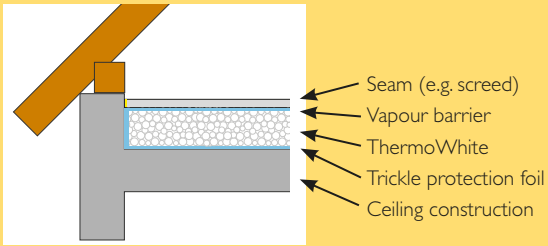
The surface can be formed in any gradient.

ThermoWhite is therefore a very cost-efficient and time-saving solution for the flat roof area.

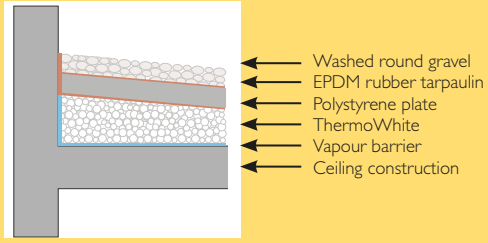
⑥ BACKFILLING OF POOLS

The use of ThermoWhite creates a compact body and a thermal-insulating coat of the basin, which also protects the installations. No floatation during filling due to the low specific weight.

Example attic



Example flat roof



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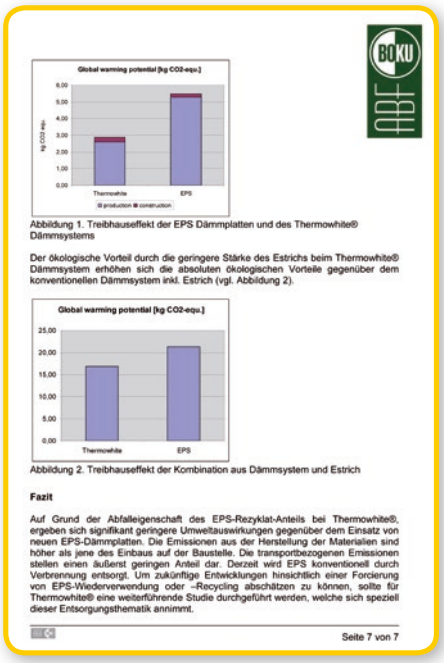
ECOLOGY

A positive ecological balance! The use of natural mineral raw materials and recycled styrofoam makes ThermoWhite a pioneer in environmental protection. A study conducted by the Institute of Waste Management at the University of Natural Resources and Applied Life Sciences in Vienna confirms ThermoWhite's positive ecological balance and the highest environmental compatibility.

Environmental effects of ThermoWhite compared to conventional EPS panel insulation systems.

- **75% less photochemical ozone**
- **54% less demand for primary energy**
- **21% less CO2**
- **14% less water demand**
- **12% less demand for resources**
- **+ 100% recycling of polystyrene waste**



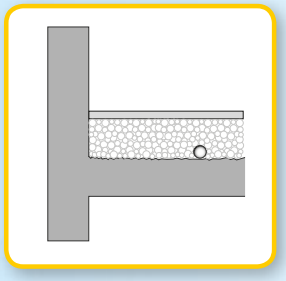
The secret of ThermoWhite lies in its unique composition. The colour White stands for an innovative technology which supports up-to-date, practice-oriented solutions.

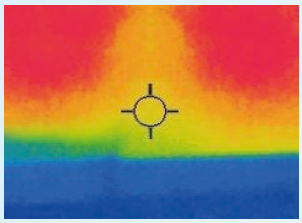
ThermoWhite offers a wide range of possibilities to better meet customer requirements:

They offer ighest quality of execution, environmentally friendly and future-oriented materials, or the fastest possible, most cost-efficient implementation of projects.

Insulation value theory and practice:

Installation with ThermoWhite (0,049 W/mK)

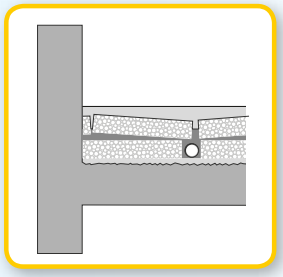


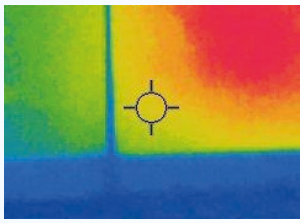


Theoretical U-Value: 0,835

Real U-Value: 0,818

Installation with insulation-panels (0,038 W/mK)





Theoretical U-Value: 0,706

Real U-Value: 0,988

CE ETA-17/0407 CE ETA-12/0428 CE ETA-17/0408

Further information and data sheets are available on **www.thermowhite.com**

TECHNOLOGY

Highest quality with ThermoWhite production technology: With our mobile production systems which are controlled by a PLC machine program it is possible to deliver consistent quality.

The production plant first produces a dry mix. The individual components Styrofoam and ThermoWhite Compound are mixed dry before mixing water is added. This is the prerequisite for certification according to ETA-17/0407, ETA-12/0428 and ETA-17/0408.

The advantage: Due to the optimum binder distribution during the dry mixing process, a homogeneous mixture is guaranteed.

In conventional screed mixers, it is nearly impossible to mix Styrofoam granules and binders to a homogeneous mass. Strong fluctuations in material quality and particularly in thermal conductivity are the results.

In order to maintain the standard conformability for ThermoWhite and to ensure a consistent product quality, a factory production control system and external monitoring is regulated by an independent testing institute.

The advantages of the mobile ThermoWhite production plant:

- **Cost effective production according ETA-17/0407, ETA-12/0428 and ETA-17/0408.**
- **Factory quality controlling system**
- **External monitoring of mobile mixing plant**
- **loose filling of polystyrene and binder**
- **Control of the mixing plant by remote control**
- **Flow volume up to 12 m³/hr possible**
- **Clean and space-saving operation system**
- **low demand of binder and compressive strength based on dry premix**

PROCESSING

PRODUCTION

ThermoWhite is produced on site and pumped into the house using a feed hose

PROCESSING

According to the measured horizontal level, the ThermoWhite thermal- and impact sound insulation is adjusted to the intended level

OPERATION

Basic installation

Processing of ThermoWhite

ThermoWhite smoothed

ETA-17/0407 ETA-12/0428 ETA-17/0408

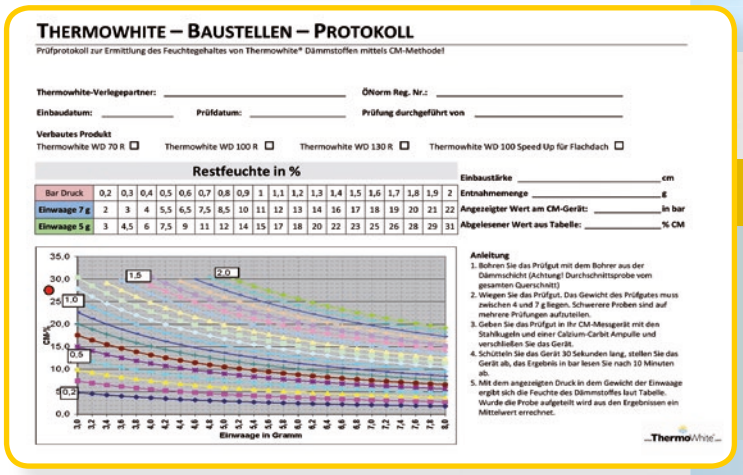
Further information and data sheets are available on **www.thermowhite.com**

COMPACTION

ThermoWhite is compacted and smoothed to a planar surface

INSTALLATION

ThermoWhite installation finished



THERMOWHITE – BAUSTELLEN – PROTOKOLL

Prüfprotokoll zur Ermittlung des Feuchtegehaltes von Thermowhite® Dämmstoffen mittels CM-Methode!

Thermowhite-Verlegepartner: _____ ÖNorm Reg. Nr.: _____

Einbaudatum: _____ Prüfdatum: _____ Prüfung durchgeführt von _____

Verbautes Produkt

Thermowhite WD 70 R ☐ Thermowhite WD 100 R ☐ Thermowhite WD 130 R ☐ Thermowhite WD 100 Speed Up für Flachdach ☐

Restfeuchte in %

Bar Druck	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9	1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2
Einwaage 7 g	2	3	4	5,5	6,5	7,5	8,5	10	11	12	13	14	16	17	18	19	20	21	22
Einwaage 5 g	3	4,5	6	7,5	9	11	12	14	15	17	18	20	22	23	25	26	28	29	31

Einbaustärke _____ cm

Entnahmemenge _____ g

Angezeigter Wert am CM-Gerät: _____ in bar

Abgelesener Wert aus Tabelle: _____ % CM

Anleitung

1. Bohren Sie das Prüfgut mit dem Bohrer aus der Dämmschicht (Achtung! Durchschnittsprobe vom gesamten Querschnitt)
2. Wiegen Sie das Prüfgut. Das Gewicht des Prüfgutes muss zwischen 4 und 7 g liegen. Schwerere Proben sind auf mehrere Prüfungen aufzuteilen.
3. Geben Sie das Prüfgut in Ihr CM-Messgerät mit den Stahlkugeln und einer Calcium-Carbit Ampulle und verschließen Sie das Gerät.
4. Schütteln Sie das Gerät 30 Sekunden lang, stellen Sie das Gerät ab, das Ergebnis in bar lesen Sie nach 10 Minuten ab.
5. Mit dem angezeigten Druck in dem Gewicht der Einwaage ergibt sich die Feuchte des Dämmstoffes laut Tabelle. Wurde die Probe aufgeteilt wird aus den Ergebnissen ein Mittelwert errechnet.

ThermoWhite

DEHYDRATION

Ready for installation after (CM Measurement) 12 CM%

Measurement protocoll – download on www.thermowhite.com

Panels with heating

Screed

hardwood floor

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CE ETA-12/0428 Europäische Technische Bewertung für European Technical Assessment for

CE ETA-17/0408 Europäische Technische Bewertung für European Technical Assessment for

weniger CO2

REFERENCES


Designhotel Wiesergut


Designhotel Wiesergut


Loisium / Ehrenhausen


Loisium / Ehrenhausen


Wellnesshotel Dilly / Windischgarsten


Vereinshaus Hinterstoder


Konditorei Zauner / Bad Ischl


Einfamilienhaus Kitzbühel

ETA-17/0407 ETA-12/0428 ETA-17/0408

Further information and data sheets are available on **www.thermowhite.com**

ThermoWhite® System

EPS-Granulate

To ensure optimal quality, ThermoWhite produces freshly foamed EPS granulate.

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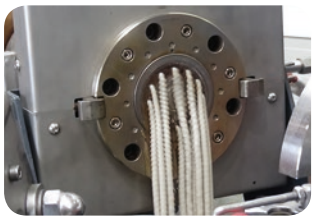
ThermoWhite 100% HBCF free quality guarantee



SYSTEM-PARTNER

GEOCELL BLÄHGLAS
www.geocell-schaumglas.eu

Schlüter® Systems
www.schlueter-systems.com

CE ETA-17/0407 | CE ETA-12/0428 | CE ETA-17/0408

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