



Source: ZW Wancor

## **Create Space – Save Energy**

### **FLOOR**

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*Application examples  
for Vacupor® in the  
area of innovative  
floor insulation*



## FLOOR INSULATION WITH VACUPOR®

Increasing importance is being attached to insulation of floors, ceilings, terraces, and balconies in modern house building, but also in renovation of old buildings.

In order to meet the requirements of the current energy conservation provisions or achieve specified standards, for example the passive house standard, increasing insulation thicknesses are often required. This frequently results in elaborate structural measures being employed and occasionally even becoming impossible with conventional insulating materials.

In this case, an ideal solution is to be found in Vacupor® vacuum insulation panels. For example insulation using conventional insulating materials it can be impossible to avoid steps/shoulders due to limited room heights, etc.

The major advantage results when it is a matter of providing the desired insulation value without the need to intervene massively in the building structure.

**Construction of a terrace insulation with Vacupor® RP-B2-S. Smooth transitions can be easily created.**



The effort involved in order to achieve the required insulation value can be considerably reduced by using Vacupor® VIPs.

Hence, Vacupor® VIPs make it possible to fulfill insulating, practical and aesthetic demands.

### All advantages at a glance

- Extremely high insulating properties with minimal structural height
- Offset-free realization of terraces, balconies, cold room floors, etc.
- No need for additional structural measures, e.g. balustrade readjustment
- Considerable scope and design for aesthetic demands
- No health or physiological risks during processing
- No creeping problems, even over prolonged periods



# CORRECT USE AND INSTALATION

## Successful application examples testify to the efficiency of Vacupor®

Floor, ceiling, terrace, and balcony insulation is already now being performed with a slim and elegant construction. VIPs have also been successfully used for floor insulation for some years now in refrigeration and deep-freeze rooms, as well as domestically.

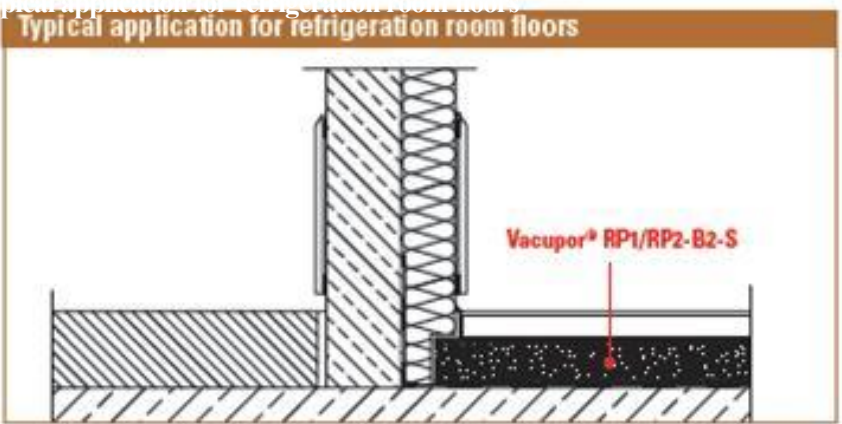
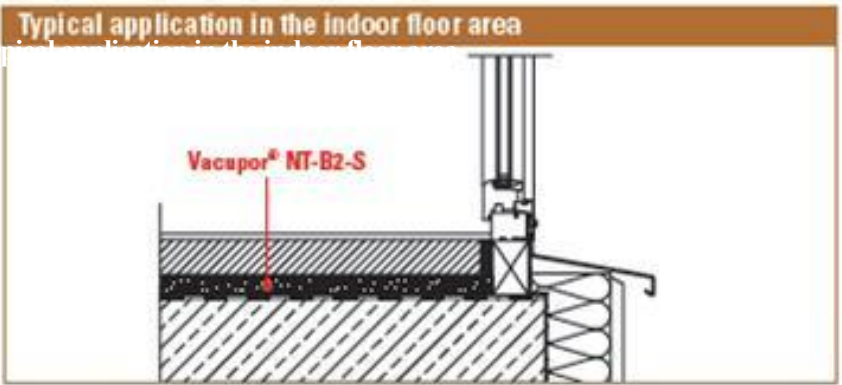
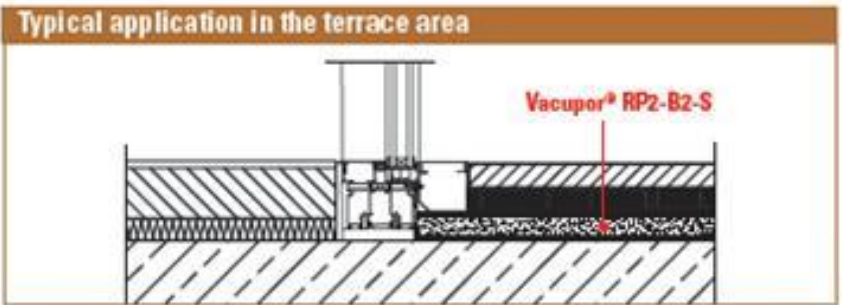
We also deliver the high-efficiency insulation in special finishes ready for construction site installation.

Vacupor® RP1-B2-S is laminated on one side with a mat and is therefore particularly suitable for double-layer, offset laying, as it is usual for example in the area of deep-freeze room floors.

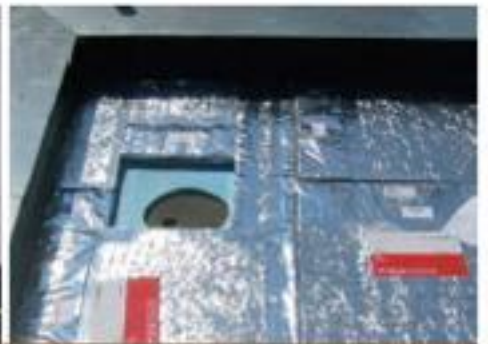
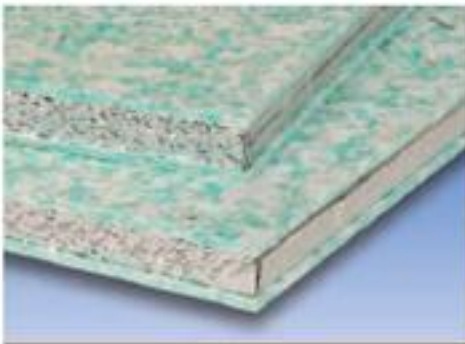
Vacupor® RP2-B2-S is covered on both sides with rubber granule mat. The protective layer allows the immediate access to the laid insulation and offers further enhanced protection against mechanical damage.

Detailed information concerning applications and processing instructions can be found at: [www.vacutherm.co.uk](http://www.vacutherm.co.uk)

Vacupor® TS-B2-S. VIP with surface-laminated footfall insulation



Vacupor® RP-B2-S are available either single or double-sided depending on the application in the floor area



## CORRECT USE AND PROCESSING

### Good planning - perfect thermal insulation

Appropriate planning beforehand is always required when using Vacupor® insulation panels. The on-site conditions should be checked. In some cases, it is recommended calling on the advice of a builder and/or a building/structural engineer. Specific substrate conditions for optimum installation of Vacupor® VIPs possibly need to be created. For unlike conventional insulating materials, Vacupor® VIPs must not be cut to size, damaged or punctured.

- After clarifying all the details and following measurement, a definite installation plan is drafted to allow subsequent installation of the VIPs at the correct position.
- The standard sizes available are adequate for most tasks on a floorarea; only at the periphery and in problem areas it necessary to use bespoke special sizes.
- We will be pleased to help you to also effectively and efficiently benefit from the advantages of Vacupor® VIPs.



#### Wohnen / Essen

##### Standard sizes:

- 31 St. 1200 x 1000 mm = R1
- 12 St. 1000 x 600 mm = R2
- 08 St. 1200 x 500 mm = R3
- 02 St. 600 x 500 mm = R4
- 05 St. 1000 x 300 mm = R5
- 05 St. 600 x 250 mm = R6

##### Special sizes:

- 03 St. 1025 x 257 mm = R7
- 04 St. 1260 x 150 mm = R8
- 01 St. 450 x 430 mm = R9
- 01 St. 430 x 130 mm = R10
- 01 St. 555 x 270 mm = R11
- 01 St. 880 x 125 mm = R12
- 03 St. 1400 x 150 mm = R13
- 02 St. 1200 x 155 mm = R14
- 01 St. 1075 x 425 mm = R15
- 01 St. 1145 x 120 mm = R16
- 01 St. 600 x 280 mm = R16a
- 01 St. 500 x 280 mm = R16b
- 01 St. 600 x 330 mm = R16c
- 02 St. 1200 x 225 mm = R17
- 02 St. 1255 x 257 mm = R18
- 01 St. 942 x 257 mm = R19
- 02 St. 825 x 300 mm = R20

#### Working

##### Standard sizes:

- 11 St. 1200 x 1000 mm = R1
- 00 St. 1000 x 600 mm = R2
- 05 St. 1200 x 500 mm = R3
- 05 St. 600 x 500 mm = R4
- 10 St. 1000 x 300 mm = R5
- 08 St. 600 x 250 mm = R6

### On-site processing is easy to implement

In principle, installation of Vacupor® VIPs does not pose any major problems and is generally possible without any special tools and accessories.

Vacupor® VIPs should nevertheless be laid by experienced specialists in order to guarantee the desired advantages of this effective insulation. It is essential

It is essential however to observe the following instructions in order to avoid problems.

The procedure during the use of VIPs should basically be the same in the case of windows, doors, glass facades and other prefabricated components.

Base must be clean and even



Protect against moisture



Protect against direct sunlight



# 15 IMPORTANT STEPS TO SUCCESS

1. The VIPs should only be installed by professionally trained processers. Ask us for appropriately qualified companies.
2. Vacupor® VIPs are to be protected against damage and must be stored in a dry place protected from sunlight. The panels must be visually inspected for possible damage before processing.
3. It is advisable on principle to always lay the panels in the same installation direction.
4. The abutting edges should ideally be covered with adhesive tape for fixing the panels.
5. Dimensional tolerances can be filled and compensated if necessary using conventional insulation.
6. Vacupor® VIPs must be laid in the dry state.
7. The surfaces on which the panels are laid must be even and free from sharp-edged or pointed objects.
8. Care should be taken that the barrier film is not damaged by uncontrolled tensile or pressure stress.



9. The barrier film must not be damaged or removed.
10. Sawing, cutting, drilling or the like is not permissible!
11. Loss of the vacuum automatically results in deterioration of the insulating properties.
12. The constant application temperature must not exceed 80° C.
13. Solvent-free adhesives and adhesive tapes are to be used for adhesive fixings.
14. Contact with solvents is to be avoided as a matter of principle.
15. We kindly request that you contact us if in doubt.

## Our Vacupor® range - just as individual as your projects

In our range, we offer different versions of Vacupor® insulation panels which can generally be tailored to the requirements of various different applications.

In principle, a wide range of covering and protective layers is feasible.

We can also produce individual shapes, thicknesses and finishes specifically for you. Our Vacupor® S types have a further improved rated value of 0.007 W/(m · K).

## New - our Vacuspeed® system

Since March 2010, we have introduced a special system for simple and rapid floor insulation based on Vacupor®. With only four VIP sizes and a trimmable cut material for the periphery, Vacuspeed® provides the alternative for effective and rapid insulation in the floor, patio and flat roof area. Ask for our special brochure or further information at:

[www.vacuum-panels.co.uk](http://www.vacuum-panels.co.uk)

Do not saw or cut



Do not drill



Do not walk on\*



## OTHER INFORMATION

### Available forms of Vacupor®

Vacupor® VIPs are manufactured precisely customized to our customers' specifications. The laying plans of the properties dictate the sizes and thicknesses required.

Our standard sizes are generally used in the floor insulation area, with which the major part of the area can be covered. The remaining areas, as a rule on the periphery, are filled with special sized panels.

#### Standard sizes for:

##### Vacupor® NT-B2-S

600 x 250 mm  
600 x 500 mm  
1000 x 600 mm  
1000 x 300 mm  
1200 x 500 mm  
1200 x 1000 mm

##### Vacupor® RP-B2-S

600 x 250 mm  
600 x 500 mm  
1000 x 600 mm  
1000 x 300 mm  
1200 x 500 mm  
1200 x 1000 mm

##### Vacupor® TS-B2-S

250 x 250 mm  
500 x 250 mm  
500 x 500 mm  
1000 x 500 mm

Our standard sizes are available in 10, 15, 20, 25 and 30 mm.

Special sizes and other thicknesses are available on request.

### Approvals and test certificates

3<sup>rd</sup> Party Accredited Technical approval under the no. Z-23.11-1662 has been available for our various Vacupor® types since December 2008. This approval covers various different applications in the indoor and outdoor area and is constantly being supplemented with further applications.

Our Vacupor® B2-S types have an even further improved rated value of 0.007 W/(m · K).

Consequently, it is easy to realize applications in which maximum demands are requested on the insulating performance.

### Quality speaks for itself - the RAL quality label

Porextherm has been an official member of the Güteschutzgemeinschaft Hartschaum e.V. (GSH) [Rigid Foam Quality Assurance Association] since April 2008.





On the same date, the "Vacuum insulation panel" product group was established within the GSH.

Renowned vacuum insulation panel manufacturers joined together in the

Güteschutzgemeinschaft Hartschaum e.V. with the target of assurance quality.

The jointly drafted quality and testing regulations were approved by the RAL, Deutsches Institut für Gütesicherung und Kennzeichnung e.V. and the RAL quality label was awarded.

Porextherm is therefore subject to very stringent quality criteria, specifically in the area of the products which are sold in the construction industry.



In addition to the technical approval for Vacupor types and likewise the Ü label for external monitoring, the RAL quality

mark will also continue to contribute to improve processors' and consumers' confidence in the quality of vacuum insulation panels.

Furthermore, Porextherm is certified according to ISO 9001 (quality management system) and ISO 14001 (environment management system). An EPD (environmental product declaration) has just recently to achieved for a selection of Vacupor® types.

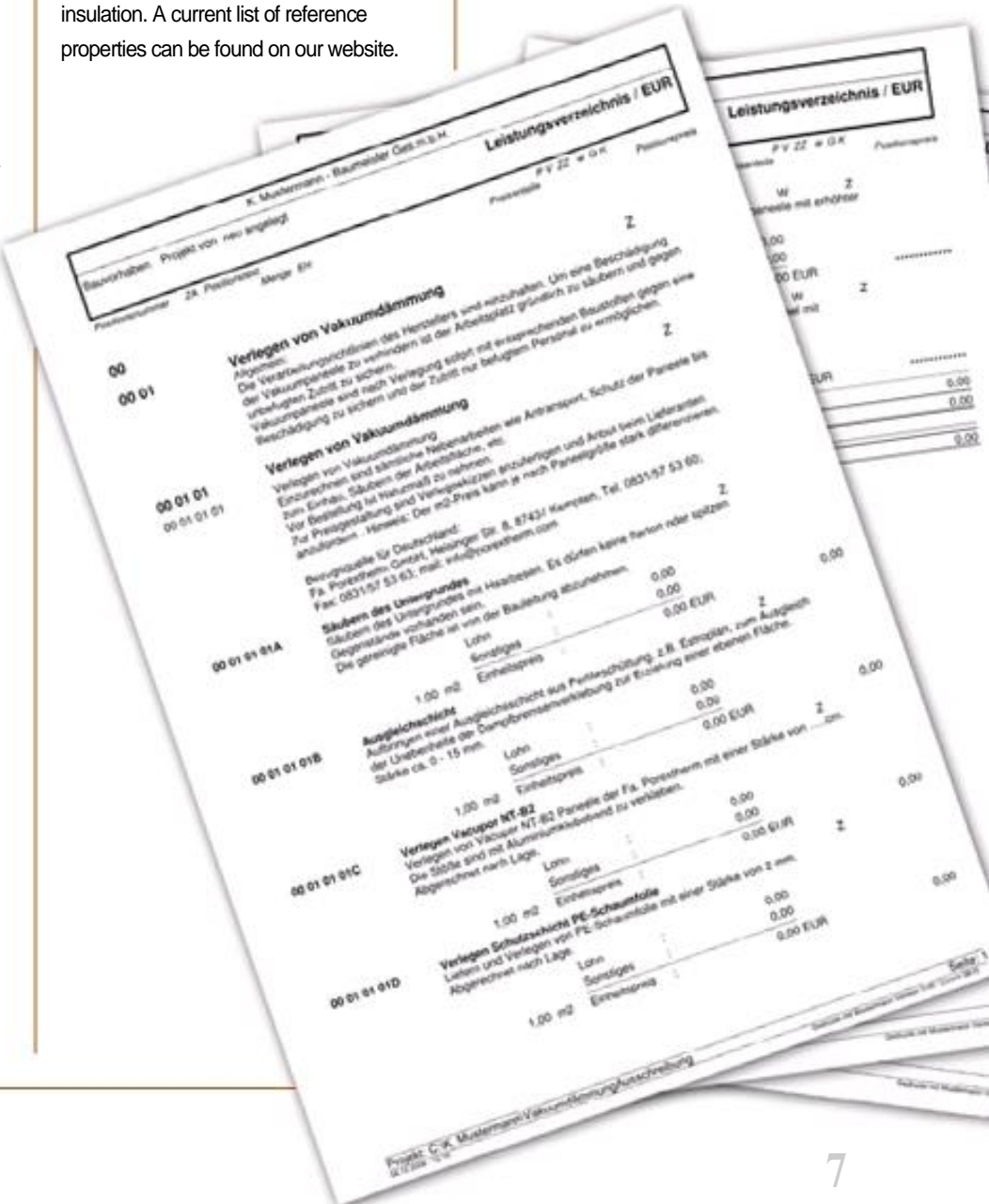
### Our references are something to be proud of

Porextherm is one of the world wide innovation and market leaders for thermal insulation and vacuum insulation panels. Our products have contributed to innovative projects (among others the Solar Decathlon house) having received awards. In conjunction with our partners, we have already successfully handled properties in the area of floor, ceiling, patio, loggia and balcony insulation. A current list of reference properties can be found on our website.

### Vacupor® Environmental Product Declaration

Vacupor® now has its environmental credentials verified by a 3<sup>rd</sup> party accreditation organization – Institut Baven und Umwelt. This shows that there is virtually no Global Warming potential resulting from the product.

For more information see [www.vacutherm.co.uk](http://www.vacutherm.co.uk)





Porextherm is your supplier of innovative thermal insulation solutions. Since the company was founded in 1989, we have been continuously increasing our core competence in the field of microporous insulation systems and have built up a wide product portfolio with patented products and production processes. Based on our own research and technology, we have developed an impressive range of insulation products manufactured on our state-of-the-art production facilities in Kempten/Germany.

Our service and products can be obtained either directly from us or through one of our selected and qualified trading partners.



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