



C R E A T E   S P A C E   -   S A V E   E N E R G Y

## **R O O F**

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*Application examples  
for Vacupor® in the  
area of modern roof  
insulation*

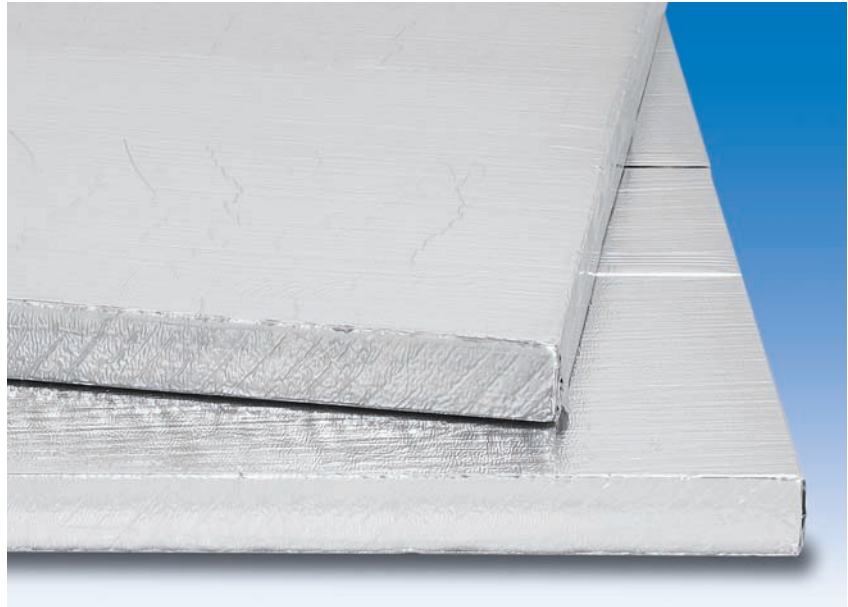
## ROOF INSULATION WITH VACUPOR®

Effective and innovative forms of thermal insulation in the roof will constantly increase in importance in the future, not just due to the current energy conservation provision, but also due to ever increasing energy prices. Whether in industrial or residential building, with flat or pitched roofs, Vacupor® stands out as an excellent high-efficiency insulating material. Particularly during renovations, Vacupor® will be a preferred choice among the insulating materials.

This is because no conventional insulating material comes even close to offering such fine insulating properties with a drastic reduction in the structural height.

During the use of conventional materials, height offsets may possibly arise. These can be avoided by the low insulation thicknesses of Vacupor®. Consequently, structural advantages occur during implementation of architectural specifications and conceptions. These issues arise above all in renovating old buildings and in integration with the existing stock of buildings.

**Construction of flat roof insulation with Vacupor® RP-B2-S and a pitched roof application with Vacupor® NT-B2-S**



In new construction and industrial construction, lower overall heights can be achieved for, which may have a positive effect on the investment.

In combination with conventional materials, Vacupor® results in other elegant solution options in subareas. For example in case of implementations which do not allow any scope in the structural height.

### All advantages at a glance

▶ Extremely high insulating properties with minimal installation height

- ▶ Steps are avoided by reduction in the structural height
- ▶ Barrier-free construction
- ▶ Major gain in space
- ▶ No need for subsequent readjustment of terrace doors and balustrades
- ▶ Tremendous increase in energy efficiency
- ▶ No creeping behavior, even over prolonged periods
- ▶ No health or physiological risks during processing



# CORRECT USE AND PROCESSING

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

Floor, ceiling, patio, loggia and balcony insulation is already now being performed with a slim and elegant construction with Vacupor®.

The roof area is increasing in significance through renovations and extension.

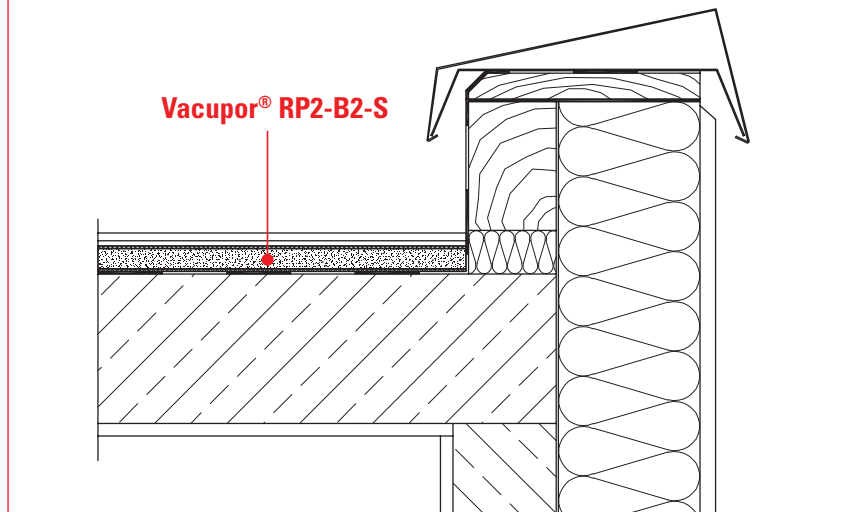
We also deliver the high-efficiency insulation in special finishes ready for construction site processing.

Vacupor® RP2-B2-S for instance is covered on both sides with rubber granule mat, thereby offering enhanced protection against mechanical damage. The protective layer allows to immediately access the laid insulation without incurring any damage.

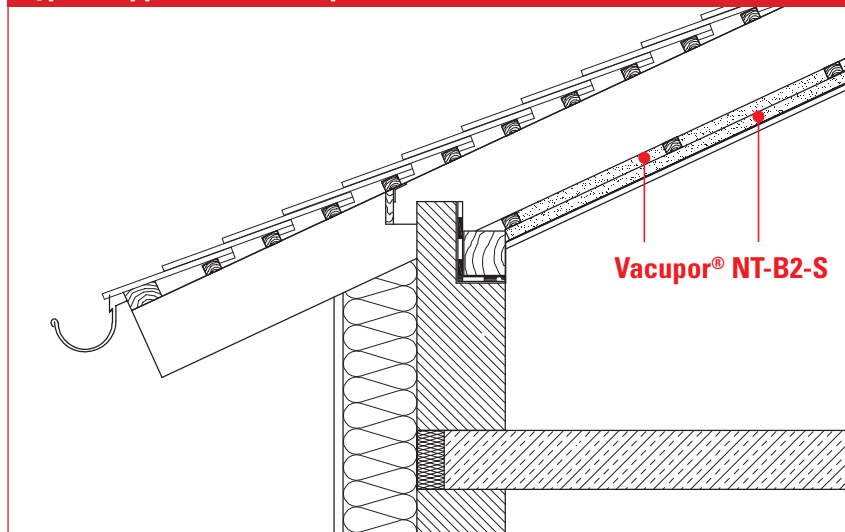
Vacupor® RP1-B2-S is coated on one side with a mat and is therefore particularly suitable for double-layer, offset laying if thermal bridge-reducing insulation is desired.

Vacupor® RP-B2-S is available either single or double-sided for different applications.

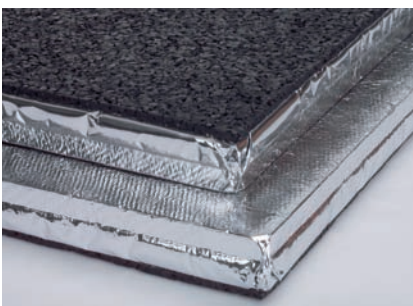
### Typical application in the flat roof area



### Typical application in the pitched roof area



Further information and datasheets concerning superstructures with Vacupor® can be found on our website: [www.bau-vip.com](http://www.bau-vip.com)



## CORRECT USE AND PROCESSING

### Good planning – perfect thermal insulation

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

After clarifying all the details and following measurement, a definite laying plan is drafted to allow subsequent installation of the VIPs at the correct position.

The available standard sizes are mainly adequate for most tasks in the roof area; only at the periphery and in problem areas is it necessary to use appropriately matching special sizes according to the planning.

We and our sales partners will be pleased to help you to also effectively and meaningfully benefit from the advantages of Vacupor® VIPs.



### 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 however to observe the following instructions in order to avoid problems.

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

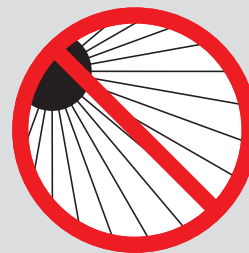
**Base must be clean and even**



**Protect against moisture**



**Protect against direct sunlight**



# 15 IMPORTANT PROCESSING INSTRUCTIONS



- 1 The VIPs should only be installed by professionally trained processors. 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 processed 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 Working by 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).



\* only applies to unprotected panels

## 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.

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 in 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 300 mm  
1000 x 600 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

##### Vacupor® XPS-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

Technical approval under the no. Z-23.11-1662 has been available for our variously modified 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.

Further current detailed information concerning the present status of the DiBt approval, the current B2 fire protection certificate, the FIW test certificate and the Ü label can be found on our website.

### 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.

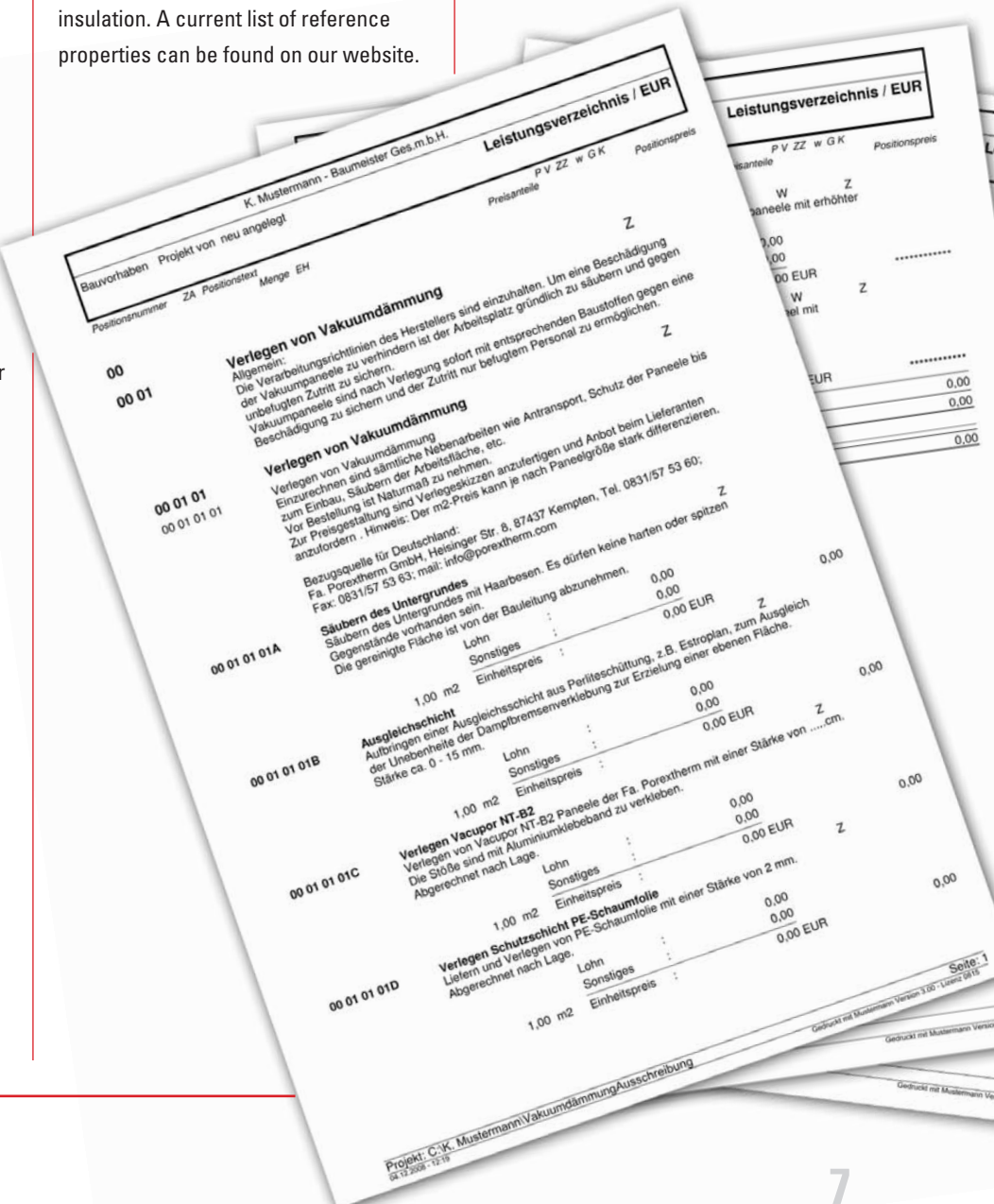
Furthermore, Porextherm is certified according to ISO 9001 (quality management system) and ISO 14001 (environment management system). An EPD (environmental product declaration) has just recently been achieved for a selection of Vacupor® types.

### 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.

### Quotations made easy – with prepared tender documents

We offer our customers an additional service for the elaboration of quotation. We have placed the most common call to tender texts in the download area of our website: [www.bau-vip.com](http://www.bau-vip.com). These will allow you to react quickly and professionally to your customers' wishes.





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 partly 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.

Authorized Porextherm partner



**Porextherm Dämmstoffe GmbH**

Heisinger Straße 8/10  
D- 87437 Kempten  
Phone: + 49 (0) 831 – 57 53 60  
Fax: + 49 (0) 831 – 57 53 63  
eMail: [info@porextherm.com](mailto:info@porextherm.com)  
[www.porextherm.com](http://www.porextherm.com)  
[www.bau-vip.com](http://www.bau-vip.com)