



Create Space – Save Energy

ROOF

*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 insulating materials.

This is because no conventional insulating material comes even close to offering such good insulating properties with a drastic reduction in thickness.

With the use of conventional materials, height offsets may arise. These can be avoided by the small insulation thicknesses of Vacupor®.

Consequently, structural and aesthetic advantages occur during the architectural process. 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, which may have a positive effect on the project.

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.
- 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, and balcony insulation is now being performed with a slim and elegant construction with Vacupor®.

The roof area is increasing in significance when carrying out renovations and extension.

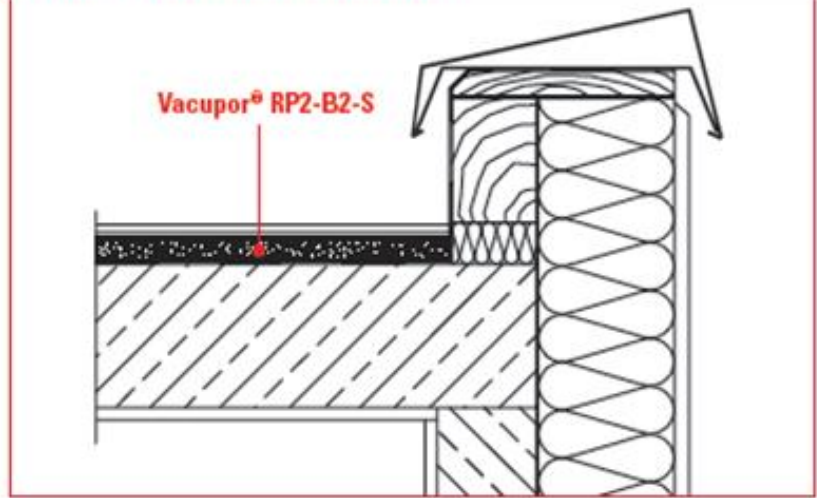
We also deliver the high-efficiency insulation in special finishes ready for Insulation to specific application.

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

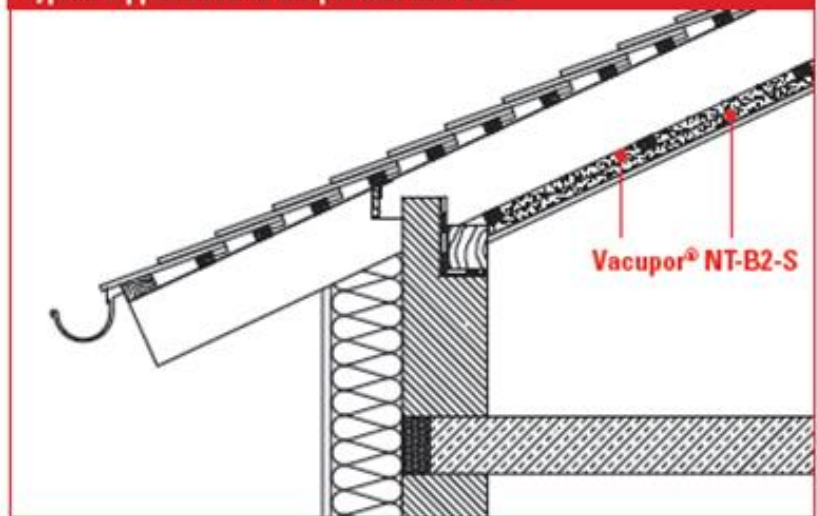
Vacupor® RP1-B2-S is coated on one side with a mat and is therefore particularly suitable for double-layer, offset laying if reduced thermal bridge insulation is desired.

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

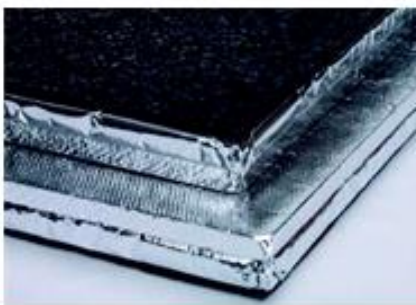
Typical application in the flat roof area



Typical application in the pitched roof area



Further information and datasheets concerning superstructures with Vacupor® can be found on our website: www.vacuum-panels.co.uk



CORRECT USE AND PROCESSING

Good planning - perfect thermal insulation

Appropriate planning is always required when using Vacupor® insulation panels. The on-site conditions should be verified. 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 in the roof area; only in problem areas is it necessary to use bespoke special sizes according to required.

We will be pleased to help you to also effectively and efficiently 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 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 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. 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).

Do not saw or cut	Do not drill	Do not walk on*

* 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 requested.

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 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

3rd Party Accredited 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 areas 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.

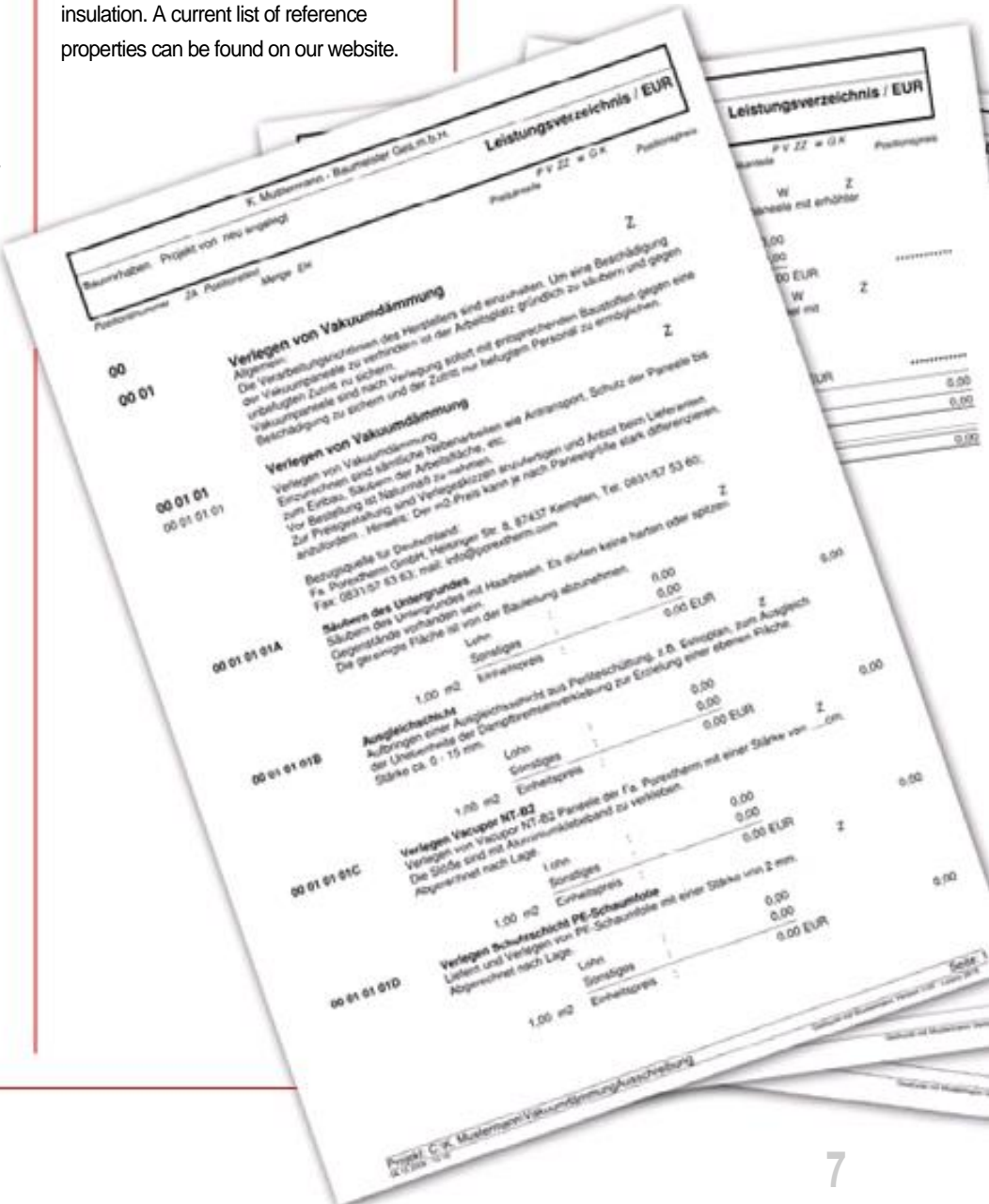
Our references are something to be proud of

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 3rd party accreditation organization – Institut Bauen und Umwelt. This shows that there is virtually no Global Warming potential resulting from the product.

For more information see 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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