



TEROSON®

WHITE PAPER

**Sustainable building certification
in metal and facade construction**



Solutions for the challenges of our time

The building sector is among the biggest consumers of resources and energy. However, this also means that there is still an incredible amount of saving potentials here. An entire industry has the power to make a significant contribution to solving the challenges of our time, such as climate protection and resource preservation.



Did you know that?

16% of water

40% energy and

50% of natural resources

are consumed in Europe by the building industry alone.

But what are these green buildings anyway?

The term „green buildings“ is somewhat misleading. Because when we talk about sustainability, ecological sustainability - the protection of the environment, climate and resources - is only one aspect. The three-pillar model also provides for economic and social sustainability as assessment criteria, i.e. the long-term economic profitability of construction projects as well as compliance with ethical standards along the supply chain.



Sustainable buildings are not „luxury“ or „satisfaction of conscience“. They are much more a guarantee for a secure future.

Vito Henning, Head of the Curtain Wall Division,
Henkel Adhesive Technologies

International certification schemes

The proportion of buildings certified as sustainable has multiplied in this country in the last ten years, an increase of over 400 % has been recorded. This applies primarily to new buildings, but renovations of existing buildings increasingly also being carried out under „green“ aspects. In 2021, more than 50 percent of high-rise buildings using TEROSON Bautechnik products were certified as sustainable.

In the construction sector, a fundamental distinction must be made between the sustainability qualification of products and that of entire buildings. Various certification systems have been established that assess the sustainability of buildings. Although they pursue similar goals, there are sometimes significant differences in the focus and requirements of the individual products.

IMPORTANT

The criteria for the sustainability qualification are continuously tightened. Therefore a regular exchange with the association or the industry for a metalworker or facade builder is essential in order to stay up to date and not to get into difficult situations out of sheer ignorance. It is therefore important to have a partner from the industry at your side who has the necessary know-how and is reliable and accessible as a supplier.

We support metal and facade builders and provide the necessary product declarations and manufacturer declarations; they can submit to the responsible auditor. We also prepare documentation for the different certification systems.

The requirements for the use of sustainable products must be described in advance in the tenders, stating the selected system with a catalog of requirements for the individual trades. These special requirements must be considered by the contractor.

CAUTION

In the event of non-compliance, the contractor faces high fines or even dismantling, which has devastating financial consequences! In structural engineering, this quickly means bankruptcy. Non-compliance is therefore not an option.



Sustainability lays the foundation for a new kind of transparency, detailing and documentation. It also becomes a digitization accelerator.

Alexander Bauer,
Head of Application Engineering
at TEROSON Bautechnik

The certification systems in comparison



DGNB
German Society for Sustainable Building

Originally developed in Germany with a strong focus on the local construction industry, this rating system is now also internationally recognized. In Germany it is the most widespread system. Five categories are available within the three pillars of sustainability for awarding points in order to achieve the levels „Bronze“ to „Platinum“. No balancing between the categories is permitted. In addition, this is the only system that takes the entire life cycle of the building into account. .

“Compared to others, the DGNB standards are the strictest, but also the most honest. That is why TEROSON Bautechnik and the entire Henkel Group have defined the DGNB criteria for the construction sector as a benchmark.”

Alexander Bauer, Head of Application Engineering at TEROSON Bautechnik



LEED
Leadership in Energy and Environmental Design

Developed in the USA but now recognized and used worldwide. There are different versions for different building types and project sizes. Buildings are evaluated in nine main categories, with the focus on energy. LEED uses a points system that rewards meeting specific criteria. The total score determines the certification level (Platinum, Gold, Silver, Certified).



BREEAM
Building Research Establishment
Environmental Assessment Method

Developed in Great Britain, the system is widely used in Europe, although there are country-specific versions. Buildings are assessed in ten main categories, including energy, water, materials, waste, health and wellbeing, and management. BREEAM uses a percentage scoring method, assessing the fulfillment of certain requirements in the categories. A certain percentage must be reached in order to receive a certification level (Pass, Good, Very Good, Excellent, Outstanding).

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Other systems applicable at national level:

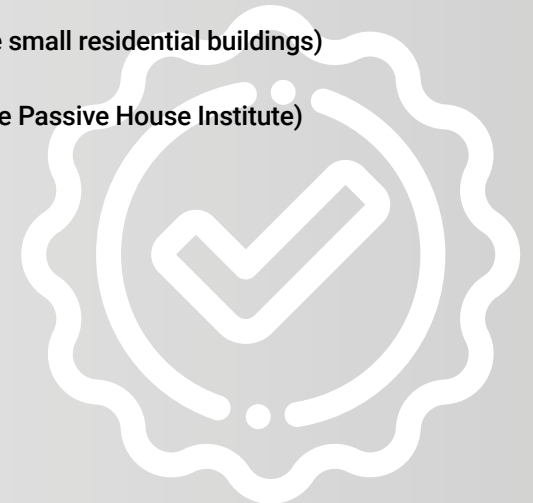
QNG (Sustainable Building Quality Seal)

BNB (Sustainable Building Rating System)

NaWoh (Quality seal for sustainable housing)

BNK (Evaluation system for sustainable small residential buildings)

PHI (Building Energy Standards from the Passive House Institute)



Sustainability Qualification of Products

Environmental Product Declarations (EPD for short) are product declarations that provide information about the environmental impact of construction products. They are based on international norms and standards and provide a transparent representation of environmental aspects throughout a product's life cycle. By providing objective environmental information, EPDs support architects, builders, and other stakeholders in the selection of sustainable products. EPDs are standardized for different types of building materials, including concrete, wood products, insulation materials, glass, and many others.

In the area of weatherproofing, the criteria of sustainable building certification are decisive. This can be verified through complete documentation in the form of manufacturer declarations and EMICODE certificates. TEROSON Bautechnik has been doing this for decades. EPDs are not necessary for the area of auxiliary and consumer goods.



Our aspiration: Sustainable building

As a provider of sealing and adhesive solutions for facades and windows, we at TEROSON Bautechnik are committed to contributing to environmentally and climate-friendly, safe and economical construction.

That's how we make an impact

Quality of the building envelope

With us, facade builders have a partner for high-quality weather and moisture protection, so that the building shell, which is durable, does not cause moisture problems and guarantees the longevity of the building.

Thermal comfort

Our sealing solutions improve thermal comfort in buildings by minimizing energy loss, providing thermal insulation properties and helping to regulate temperature.

Indoor quality

Our sealing and adhesive solutions have a maximum of only a low content of volatile organic compounds (VOCs) and almost no hazardous

substances (SVHCs). In this way, we ensure good indoor air quality and the health of users.

Sound Protection

We have developed coating products that do provide for sound insulation when used in sealing facades, by reducing noise coming from the outside and creating effective sound insulation through anti-drumming. However, our sealing solutions also make a significant contribution to noise reduction (airborne sound) within the building connection joints.

Environmental risks

We minimize environmental risks by using eco-friendly materials and techniques that reduce the environmental footprint of our products and promote resource efficiency.

Dismantling/recycling

As a responsible company, we support the dismantling and proper disposal of our facade sealing materials to reduce waste.

Together we build a sustainable future



We invest and partner to develop energy efficient solutions and sustainable building materials.

Partnering for green building practices and advancement across the value chain.

VOCs and SVHCs: critical factors for sealants

What are VOCs and SVHCs? Why are they critical factors in the field of weatherproofing solutions?

So-called volatile organic compounds (VOC) are chemical compounds that evaporate easily at room temperature and are released into the air. Their use is critical as they contribute to air pollution and can cause health problems such as respiratory irritation or allergies and they are even suspected of being carcinogenic.

Therefore, their use is subject to strict regulations and is regulated under the REACH regulation of the European Union (Regulation (EC) No. 1907/2006). Certain VOCs can also be classified as dangerous substances in relation to REACH, depending on their properties and effects.

Are there VOCs and SVHCs in TEROSON Bautechnik products?

Yes, but only to an extremely small extent that is classified as harmless to people and the environment. For SVHC this means a concentration of < 0.1%.

How does TEROSON Bautechnik prove the harmlessness of its products?

We have had our products independently tested and certified for VOC emissions by the Association for Emission Controlled Laying Materials, Adhesives and Building Products. Many items in our entire portfolio have already been awarded the EMICODE® EC 1PLUS environmental seal, the highest certification levels. This applies in particular to our tape products, all of which are EMICODE classified and therefore have a proven low level of emissions. This makes them suitable for use in sensitive interiors such as schools and hospitals.



Where can I find information on REACH-compliant components?

Our white safety data sheets as well as declarations and explanations are always available on our website:

<https://profiguide.teroson-bautechnik.com/downloads/>

Build and renovate sustainably with TEROSON Bautechnik

For holistically sustainable construction projects

Ecological Benefits

- Reduction of pollutant emissions
- Increase of energy efficiency
- Resource conservation
- Minimizing health and environmental hazards
- Promotion of dismantling and Recycling

Economic benefits

- Durable Buildings
- Low maintenance costs
- Life cycle cost reduction
- Cost savings through increased efficiency
- Reduced vacancy
- Funding programs of the KfW Bank

Social benefits

- Improvement of light and room climate conditions
- Reduction of running costs
- Increase in well-being
- Reduction of diseases



Environmental protection and sustainability are no longer a “nice to have”. In addition to fire protection and sound insulation, they become a survival factor.

Vito Henning, Head of the Curtain Wall Division,
Henkel Adhesive Technologies



About TEROSON Bautechnik

TEROSON Bautechnik offers comprehensive product and consulting expertise for sealing and adhesive solutions in the areas of facades and windows. As part of the Düsseldorf-based Henkel Group, the company supplies sealing foils and tapes, adhesives, joint sealants, special sealants and other system components to metal and window manufacturers.

Customers can rely on more than 30 years of experience in international and national projects.

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Do you have any questions on the topic of „Sustainable building certification in metal and facade construction“? Then please do not hesitate to contact us.

