



**SOUDAL**

[www.soudal.com](http://www.soudal.com)

# Working on Sustainability

## Working on the Future



REDUCING CO<sub>2</sub> EMISSION  
DUE TO EFFICIENT ENERGY USE



REDUCED WATER USE  
DUE TO RECOVERY OF RAINWATER



WASTE REDUCTION  
DUE TO INTENSIVE RECYCLING



ENERGY REDUCTION  
DUE TO NEW PRODUCTION TECHNIQUES



ENERGY REDUCTION  
DUE TO NEW BUILDING SOLUTIONS



# Focus on Sustainability

Soudal takes its responsibility regarding the environment seriously and is constantly looking for innovative and durable solutions. Following the regulations and legislation in the different countries is no more than obvious. Soudal is doing more. In the company's opinion, minimizing ecologic impact starts with a pro-active policy regarding corporate environmental responsibility.

Soudal believes that economic growth, environmental goals and corporate responsibility can go hand in hand. Working on the future means working on sustainability and vice versa. This is something Soudal puts into daily practice.

While we have made progress, we recognize that there is more to do. Investments in sustainability-focused R&D guarantee a future-oriented outlook and the determination to continue on a journey through sustainable growth.



*The new R&D Center: State-of-the-art analysis equipment boosts innovation and the Soudal academy enables hands-on training. Investments in a better, greener future...*

# Low-impact products

Next to the environmental impact, energy efficiency, health protection and indoor air quality are important working points. Soudal is continuously developing new solutions which are compliant with the strictest standards of national and international certifications. Developing products with very low environmental impact is one thing, creating energy efficient products and solutions is another.

## Using Soudal solutions = SAVING ENERGY

Many Soudal products, especially PU Foams and adhesive foams, can help to reduce energy consumption and to avoid energy losses due to its insulating capacities.

PU (polyurethane) is an insulating material used in many forms and applications. In the building sector, PU Foams are used on roofs, in basements, on floors, in industrial buildings and cavity walls for insulation. PU Foam has proved to be a trustworthy material, not only through its high insulation value but also by its many application areas.

The insulation capacity of a material is expressed in the lambda thermal performance value ( $\lambda$ ), in which a lower lambda value means better insulating properties. Typical properties of PU construction foams are high thermal and acoustical insulation, very good filling capacities, excellent mechanical properties and outstanding stability.

Soudal PU Foams offer the best possible insulation values in order to lower energy loss, keep energy costs down and help the environment by reducing CO<sub>2</sub> emissions. They reduce and even avoid air circulation between doors/windows and insulation. Flexifoam is a special example, being much more flexible than construction foams. It accepts the relative movement of the building and windows perfectly.

- A fundamental application area of Flexifoam is Soudal Window System, a combination of multiple products taking care of the sealing between joinery and masonry. Not only Flexifoam, but also Acryrub, Soudaseal 215LM, Soudafoil 330D and 360H, SWS-tape etc. are part of the SWS range.
- As buildings are being insulated better and better, the share of ventilation heat loss in the total energy loss rises. A relevant part of these losses are coming from infiltration and exfiltration of air through materials and openings in the building shell. To reduce these losses, more effort is put in making building shells more air tight. SWS has been tested in independent institutes on different parameters and, if correctly applied, SWS offers air- and damp-tightness on the inside and optimal thermal and acoustic insulation.
- Soudal also offers adhesive foams like Soudabond Easy and Soudatherm Roof, which can be used for efficient and economical permanent bonding of insulation panels in building and construction. Due to its low thermal conductivity it also enhances the performance of insulation panels when filling gaps.
- For further information about SWS, please visit [www.soudalwindowsystem.com](http://www.soudalwindowsystem.com).



Soudal Window System for better insulation, keeps energy costs down.

# Pioneering in low-impact products

Soudal is continuously searching for innovation, which leads to top of the market solutions and unique ecological improvements in its products. Some examples:

SMX-foam – The first on the market with an isocyanate-free foam. This foam has all the benefits of Classic PU Foam and on top of its insulating capacities, does not harm the consumer. With this halogen- and isocyanate-free foam, Soudal developed a unique formula way ahead of its time in the world of construction.



In the past years, Soudal developed solvent free, water based and isocyanate free product families as replacement of classic technologies. These products have lower impact on the environment and are examples of the necessity of continuous innovation.

First on the market with water based construction adhesives with extreme high tack in comparison with solvent based products. Yet again, Soudal acted as a pioneer in this area by looking for solvent-free solutions with an equally high or even higher quality standard.

## Emicode EC1+

One of the strictest certifications is the EMICODE EC1+, a quality control scheme which awards labels to advanced, solvent-free, low-emission building materials.



Extensive testing and continuous monitoring is assured by GEV-Association for the Control of Emissions in Products for Flooring Installation, Adhesives and Installation Materials. By using highly sensitive laboratory analysis techniques, such as gas chromatography and mass spectrometry, and by following standardized test procedures, even the smallest traces of volatile organic compounds (VOC) in the air can be identified and quantified.

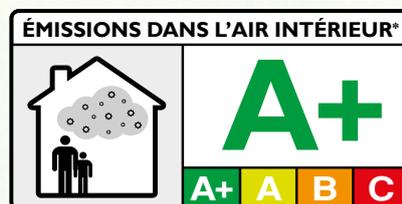
For further information on GEV-EMICODE®, please visit the website [www.emicode.de](http://www.emicode.de)

Flexifoam is one of many Soudal-products with a EC1+-certificate, besides the fact that it has sustainable insulation properties. Also many hybrid sealants, parquet adhesives, silicones as well as Fix All® Classic are EC1+-certified which means that they

offer the best possible solution for optimal indoor air quality.

On top of those certificates, quite a few Soudal products are M1-certified. FISIAQ, the Finnish Society of Indoor Air Quality and Climate, has classified building materials into three groups, of which M1 is the top class. Fix All® Classic is just one of the M1 certified products.

In addition, French regulation foresees different emission classes. A+ means the lowest level of emission and is therefore the best obtainable class. Most Soudal products have this A+ label.



Flexifoam for longer lasting insulation.

# LEED® and BREEAM®

**Soudal sealants and adhesives can contribute to obtaining green building certificates like LEED® and BREEAM®. The assessment methods (and rating systems) are set against established benchmarks to evaluate a building's specification, design, construction and use.**

**LEED®** (Leadership in Energy and Environmental Design) is a voluntary, consensus-based, market-driven program developed by the US Green Building Council, which provides third-party verification of green buildings. From individual buildings and homes, to entire neighborhoods and communities, LEED is transforming the way buildings are designed, constructed, and operated. Comprehensive and flexible, LEED addresses the entire lifecycle of a building. Soudal offers a wide range of products that meet LEED IEQ Credit 4.1, which states VOC limitations for adhesives and sealants.

For further information about LEED®, please visit the website <https://new.usgbc.org/leed>. To check the product compliance, check the TDS or ask for the MSDS of the product via the contact information on our website [www.soudal.com](http://www.soudal.com)

**BREEAM®** sets the standard for best practice in sustainable building design, construction and operation and has become one of the most comprehensive and widely recognized measures of a building's environmental performance. This rating method for green buildings was established in the UK by the Building Research Establishment (BRE).

The measures used represent a broad range of categories and criteria from energy to ecology. They include aspects related to energy and water use, the internal environment (health and well-being), pollution, transport, materials, waste, ecology and management processes.

BREEAM is the preferred scheme for a number of the national Green Building Councils across Europe. Both for LEED® as for BREEAM®, Soudal products can contribute to earn a certification due to their very low VOC content.

For further information about BREEAM®, please visit the website [www.breeam.org](http://www.breeam.org) or the local BREEAM® website.

LEED® is a registered trademark of the U.S. Green Building Council. BREEAM® is a registered trademark of the BRE group.



Sustainable building design.

# Production efficiency

Besides the low environmental impact of finished products, Soudal concerns include production efficiency and limited use of raw materials, water and energy.

A major point of interest is reusing, minimizing and recycling waste. In many ways Soudal is reducing waste flows and it takes a head start with the fully automated mixing of a large part of the total production. In this way production is possible without losses or the need for cleaning.

The waste flows that are still generated are recycled in a maximal way. Paper/cardboard, plastic, iron, wood, thermal oils, electronics, ink cartridges,... are all stored separately and recycled. In addition, waste processing companies are obliged by Soudal to recycle waste energetically.

Not only recycling is important, also the following efforts are made:

- The use of water is minimized and rainwater recuperation systems are used for certain processes in the plants.
- More and more, used vessels are being cleaned with solvent free products.
- Cosinus phi principle: More efficient use of electricity due to reduced transformation losses. The same kW/h is used by the machines as it is originally generated.
- High efficiency lighting: the amount

of lights and the corresponding energy used in the new R&D building is calculated in an optimal way regarding energy savings, as well as the fact that they're motion sensitive.

- The heat generated by the compressors during the mixing process is not lost, but is used for central heating of the plants. In the offices heat pumps are used so that central heating requires less energy.

Soudal does not rest on its laurels and with every new process or product introduction, it is looking for the most energy efficient, the safest and the lowest impact solutions.



# Sustainability is key

## Responsible Care® partner of the chemical industry

Responsible Care, of which Soudal is a partner through membership of Essenscia, is the chemical industry's unique global initiative that drives continuous improvement in health, safety and environmental performance, together with open and transparent communication with stakeholders. Responsible Care embraces the development and application of sustainable chemistry, helping our industry contribute to sustainable development while allowing us to meet the world's growing need for essential chemicals and the products those chemicals make possible.

For further information on Responsible Care®, please visit the website [www.icca-chem.org](http://www.icca-chem.org)



**Responsible Care®**  
OUR COMMITMENT TO SUSTAINABILITY

## Recycling of used products

Soudal is actively searching for new waste management systems and recycling solutions. In this way, Soudal is a co-founder of PDR, which develops new recycling technologies and collects, transforms and commercializes production-, product-, or package waste. A lot of PUR-foam spray-cans are collected and afterwards recycled for about 99%.

For further information on PDR, please visit the website [www.pdr.de](http://www.pdr.de)



## Tight Vent Europe

Soudal is a founding partner of Tight Vent Europe, the European partner for the Airtightness of Buildings and Ductwork. Through a European collaboration of industries and stakeholders in the context of Tight Vent, Soudal believes that substantial progress can be made.

For further information on Tight Vent Europe, please visit the website [www.tightvent.eu](http://www.tightvent.eu)



## FEICA-membership: Commitment to use the planet's resources more responsibly and efficiently.

FEICA is the Association of the European Adhesive and Sealant Industry, which represents and defends the interests of this very innovative industry. It seeks to develop communication with the stakeholders and strengthens the network between its members. FEICA also focuses on environmental sustainability. The members of FEICA support and maintain an intensive internal and external communication process informing on issues relating to Environmental, Health and Safety protection (EHS).



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