ACERMI & INSULATION PROFESSIONALS

Association pour la CERtification des Matériaux Isolants newsletter

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Insights of the presidents of ACERMI on the France Relance recovery plan and ACERMI's contribution

Joint interview with the presidents of ACERMI, Etienne Crépon, president of the CSTB, and Thomas Grenon, president of the National Metrology and Test Laboratory (LNE), on the French energy recovery plan and ACERMI's contribution.

Étienne Crépon
President of CSTB

Thomas Grenon
President of the LNE

The French Ministry of Finance has developed an ecological and energy transition recovery plan. Can you tell us about it?

Thomas Grenon : The France Relance recovery plan has been in place for more than a year now to respond to the effects of the Covid-19 crisis and guide the major strategic challenges of France through to 2030.

Étienne Crépon : The €100 billion plan has three components: ecological transition, competitiveness and cohesiveness. The first €30 billion component supports the ecological transition in all sectors that emit high levels of greenhouse gases, including construction, with €6.7 billion for energy renovation in public and private buildings..

T.G. : Ecological transition is a major focus in addressing the climate emergency and is helping to pave our low-carbon path. Energy renovation features prominently in this recovery. The objectives are to increase the use of renewable energy and reduce energy consumption. The need is real and urgent: in the residential sector 17% of homes in France are poorly insulated "thermal sieves," and only 6.6% of housing units are labeled A or B..

ACERMI & INSULATION PROFESSIONALS now has a Performance section

To be certified, the performance parameters of an insulation product must be tested and verified. From production plant sampling to writing the test report, the product goes through various tests to assess its performance

The new section uses images to highlight the technical performance of products.

This issue of the letter offers you a closeup of the mechanical creep test.

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ACERMI in BRIEF

ACERMI quality certification is granted by the Association pour la CERtification des Matériaux Isolants, a nonprofit organization (French organization act 1901) established in 1983 by the CSTB and LNE. It enables insulation professionals to demonstrate the performance of their insulation products and achieve certification on completion of testing, inspection and auditing.

Can you describe the expertise of ACERMI in the field of insulation and how the organization can contribute to the recovery plan's success?

E.C. : ACERMI, under the auspices of the CSTB and LNE, enables all insulation professionals to demonstrate the performance of the insulation materials it certifies. Of course, we focus on thermal performance determined according to the purpose the material serves within the structure. There is also ISOLE classification of mechanical (compression, bending, cohesion) and moisture (water and water vapor) behavior. To guide project owners, ACERMI provides a search engine that identifies all certified products that meet their needs.

In addition, in 2013, ACERMI implemented a streamlined procedure called Springboard to enable SMEs to promote the performance of their innovative products through certification of thermal performance, benefiting from the reputation of the ACERMI brand. They have three years to prepare for ACERMI certification.

ACERMI Springboard has already made it possible for over 70 biosourced products, mostly developed by SMEs, to access the market by developing standards specifically designed for them. They include recycled cotton, wood fiber/wool, expanded cork, cellulose wadding and many other products made from

T.G. : Good insulation reduces energy consumption by up to 65%. It therefore has a place in the France Relance plan. ACERMI certifies insulation materials to guarantee their thermal performance. It is a mark of trust in the values displayed, and it makes it possible to consolidate both the thermal calculations and the overall strategy of building stock renovation. There are more than 900 ACERMI certificates, making a sufficient number of insulation materials to meet all needs. To benefit from renovation subsidies, including the French government's MaPrimeRénov', encouraged in France Relance, the insulation material must have a minimum thermal resistance, which varies depending on thickness combined with conductivity. ACERMI certificates make it possible to meet this obligation and thereby support the growing trend in energy renovations. Since the recovery plan was implemented, more than 500,000 MaPrimeRénov' applications have been filed.

And what about the environmental component? What are ACERMI's expertise and possible contributions in this area?

T.G. : By reducing the energy consumption of buildings, insulation clearly contributes to reducing greenhouse gas emissions. Our organization therefore plays a central role in the environmental component. Above all, we want to support industrial innovation through standardization and our Springboard standard. Springboard makes it possible to work with construction stakeholders to certify the thermal performance of insulation materials not covered by existing ACERMI standards. This provides essential support to the industry by offering an increasing selection of insulation materials, especially because the French Environmental Regulations (RE) 2020 emphasize biosourced materials for their thermal qualities and ability to store carbon.

E.C. : Since its founding, ACERMI has contributed to improving information on the real quality of products placed on the market, and ensuring the comparability of various insulation products. It therefore enables project owners and companies to choose the products most suited to their needs so they can increase the reliability of the technical components of projects.

Whether a product is traditional or innovative, its ACERMI certification enables renovation projects to meet the performance criteria required to qualify for Energy Savings Certificates (CEE) or MaPrimeRénov'. So, ACERMI helps in securing project financing.

Your wrap-up?

T.G. : For nearly forty years, ACERMI's mission has been to support an entire ecosystem, from insulation manufacturers to their most diverse stakeholders (from specifiers to citizens). Strengthened by the synergy between the LNE and the CSTB and their complementary expertise, ACERMI has two major priorities: trust and innovation. Two key pillars for the transitions that we now need. For the LNE, within ACERMI and beyond, these imperatives are even stronger in its other activities.

E.C. : Countering climate change will require massive investment to reduce energy consumption and greenhouse gas emissions. When launching renovation projects, it is essential to choose the most suitable products. Using an ACERMIcertified product assures performance and eligibility for government financial assistance. ACERMI is guiding the energy transition in terms of thermal insulation, particularly through its contribution to reducing energy consumption in buildings and thus to mitigating climate change. After choosing a competent and qualified installation company, using an ACERMIcertified product makes it possible to create any renovation project.

... Performance
continued

Tests on floor insulation

Overview

Mechanical tests aim to assess the performance of insulation materials under various mechanical stress conditions: traction, compression and creep over time.

Closeup of the creep test

Background. Deformation over the long term caused by crushing an insulation material installed as an insulating underlayment can have an impact on the characteristics of the structure. The creep test determines the deformation of a product over time by classifying its characteristics with regard to the standards of use.

Testing operation. The insulation material is subjected to a constant load over several months to measure the resulting deformation and extrapolate the results to determine a 10-year value.

Result. ACERMI Technical Specifications 6 on determining the beneath floor screed underlay or floating slab and undertile classification enables industrial companies to meet market expectations for this requirement. The display on the ACERMI certificate attests to the performance value.

Understanding classification

The class (SC1 or SC2) is based on crushing under a load. It indicates the composition of the underlying structure.

A letter (A or B) indicates the permissible loads in the room (500 or 200 kg/sqm) with, as an index, a number from 1 to 4 related to the total reduction in thickness in ten years, used only in the event of the overlap of two insulating underlayers. Specific characteristics can be added to the classification:

A: acoustic underlay for impact noise treatment

Ch: underlay for floor heating.

Insulation & Uses

Thermal insulation systems the most common in unused roof spaces and converted attics **are now mainstream**

The feedback from experience and experimentation over many years through Technical Appraisals is making it possible for thermal insulation systems in unused roof spaces (with loose-fill mineral wool and cellulose) and converted attics (with mineral wool in panels or rolls) to become commonplace. As a result, these types of products are now subject to the NF DTU 45.10 and 45.11 building codes, and ACERMI certification guarantees the intrinsic characteristics of the insulation materials used and compliance with the standards in both codes.

- NF DTU 45.10 (published in July 2020) "Insulation of attics by panels or rolls of manufactured mineral wool" applies to thermal insulation on the inside of unused roof spaces and converted attics in new and existing residential and nonresidential buildings. It requires the installation company to have good knowledge of the site before performing the work—climate zone, presence of smoke ducts, downlights, quality of the frame, type of ceiling—and therefore implies prior inspection of the supporting structure.

- NF DTU 45.11 (published in March 2020) "Insulation of unused roof spaces with mineral wool and cellulose wadding from paper" constitutes the standard that governs the best practices for thermal and acoustic insulation works inside the floors of unused roof spaces and nonconvertible attics. Installation takes place by blowing using pneumatic machines. This building code only covers the installation of loose-fill insulation materials manufactured and packaged in a plant and applies exclusively to premises with low or medium humidity. It does not cover the insulation of floors ventilated on the underside by outside air, positive pressure floors and manual spreading. It specifies the materials to use and the precautions to take during installation.

A solution widely used in both new and renovated buildings: **pitched roofs for converted attics using roll or panel products**

The pitched roof is insulated by inserting thermal insulation between and/or under the roof structure (rafters, trusses, purlins, etc.). Insulation with two cross-layers between and under the roof structure reduces the impact of the integrated thermal bridges. In new buildings and those under renovation, NF DTU 45.10 specifies whether there is need for a vapor barrier, depending on the type of configuration (roofs, roof underlayments),.

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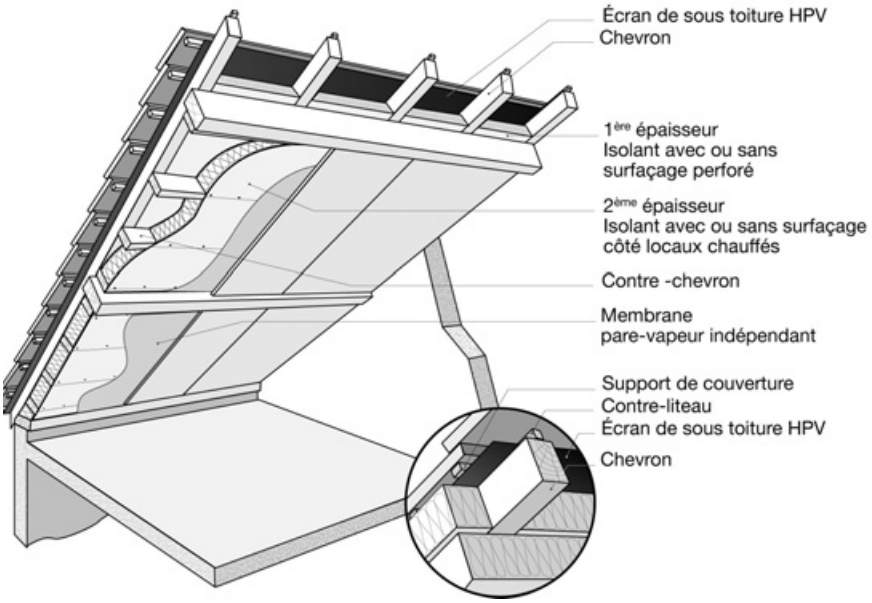
Beyond NF DTU 45.10, it is possible to improve the thermal performance and airtightness of pitched roofs by installing an unventilated high-permeability vapor membrane in the underside, on the exterior side, by a roofer (in new or heavily renovated structures with complete removal of roof elements), which involves, in this configuration, the implementation of a continuous vapor barrier on the interior side.

This construction technique is described in the NF DTU 45.10, NF DTU 25.41, NF DTU 31.2 and DTU série 40 French standards (roofs and flexible air barriers) and in the Technical Assessments and Technical Application Documents for nontraditional insulation materials. ACERMI certification is evidence of conformity of the insulation product with the requirements set out in the standards and application documents listed above.

The insulation products covered do not contribute to the mechanical stability of the structure. However, the insulation material must be able to withstand the mechanical stress conditions imposed during installation, and especially the traction loads under its own weight. In addition, the dimension and weight variations of the product in response to temperature and humidity must not generate significant mechanical stresses on other adjacent roof components (roof underlayments, structural framework or internal finishing). They must not limit the width of the external ventilated air space.

Once the insulation product has been selected, all that remains is to follow the recommendations set out in NF DTU 45.10, DTU 25.41 or Technical Assessments or Technical Application Documents to achieve longterm, high-performance insulation.



Example of configuration with high-permeability vapor membrane roof underlayment

DID YOU KNOW?

You can view certificates on tablets and smartphones while on worksites.

The ACERMI website uses responsive design to scale to the size of your screen. This enables you to access certificates on your tablet or smartphone so you can make the checks you need on-site, with ease.

New professional rules for independent beneath weatherproofing systems in ballasted roofs and inverted roof insulation for flat roofs

Since July 2021, inverted roof insulation panels for flat roofs and independent beneath weatherproofing systems in ballasted roofs are considered traditional techniques. They no longer require Technical Appraisals.

The *Chambre syndicale française de l'étanchéité* (French weatherproofing association) (CSFE) has therefore drafted the professional rules for these applications.

Each benefits from ACERMI certification for the defined characteristics, which guarantees users the performance and suitability of insulation products in the works in which they are installed.

Their ACERMI certification reference documents are available at the following address: https://www.acermi.com/fr/documents-reference/referentiels-acermi.

LATEST CERTIFICATES
http://www.acermi.com/isolants-certifies/derniers

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