



Fiberglass wall covering providing thermal comfort

The solution that shortens the period of thermal discomfort during heating

Getting the temperature quickly to the required level can be a challenge during winter time

The house is cold, we are cold, we switch the heating on and then we **must sometimes wait more than an hour** before feeling conditions have reached a comfortable temperature.

And this inconvenience is faced regularly by everyone: when waking up if the heating was switched off during the night, when arriving at work, when coming back from a weekend away.

The common reaction is to **raise the heating temperature** to quickly alleviate the period of discomfort. However, this means **consuming more heat** and therefore **paying more** and **having a higher impact on the environment**.

How can we shorten those transition periods whilst keeping heating costs down and being environmentally friendly?



Novelio® Thermal provides the solution with a high-performance product

It reduces the period of thermal discomfort and also provides acoustic comfort

- It can reduce discomfort periods by up to 1h30
- It absorbs an average of 15% of environment noise

A decorative, soft and resistant wall covering as are all products in the Novelio® range

- Reinforces delicate surfaces
- Resists abrasion and impact
- Covers all cracks

Thermal principle

Novelio® Thermal combines a **pre-painted fiberglass wall covering and a sub-layer made of fleece** specially designed to improve thermal comfort.

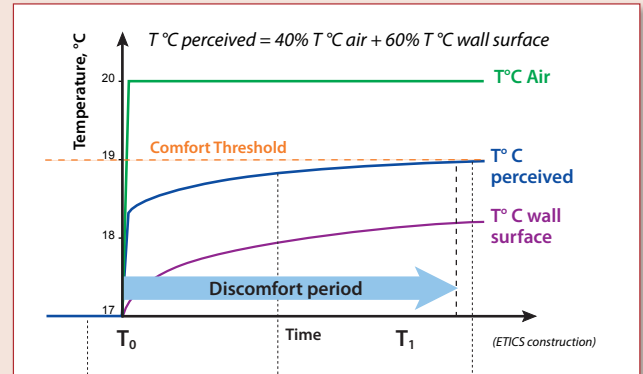
In a room, the **perceived temperature** correlates at 40%* to air temperature and at 60%* to wall surface temperature. When we heat a room, the air temperature rises quickly while the wall temperature increases more gradually: it is **this transition period that is a source of discomfort**.

*with no forced convection

The temperature on the **surface of the wall will be equal to the air temperature only once the total mass of the wall** (up to the insulation layer) **has been heated** sufficiently. The further the insulation layer is from the surface the longer the time it takes to reach air temperature.

Due to **its low thermal effusivity, Novelio® Thermal** allows the **wall surface temperature to be increased very quickly** before heating the wall mass.

What is the perceived temperature?



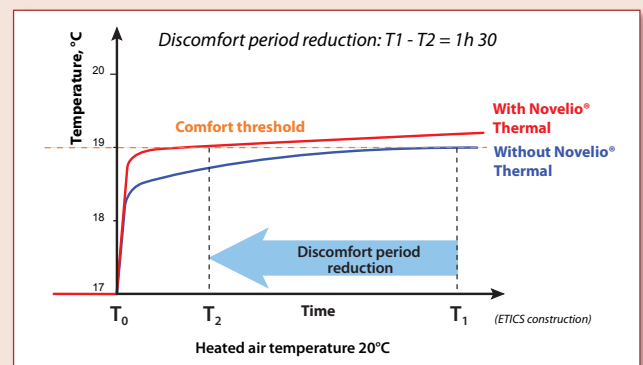
Thermal efficiency

Several tests have been performed in real conditions and using numerical simulations to assess the exact time saving Novelio® Thermal provides.

The efficiency is directly linked to the type of building construction, the type of insulation in use and to climate. **Thermal “discomfort” reduction can vary from 15 min** for internally-insulated concrete walls in Barcelona to **1h30 min** for externally-insulated concrete walls in Vienna.*

*Simulation results available on request

Perceived temperature evolution

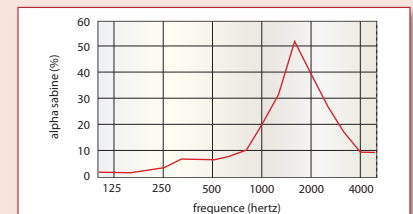


And furthermore...

In combination with its thermal properties, Novelio® Thermal **also provides Acoustic comfort: once painted**, it reduces room noise by an average of 15% and up to 50% for some frequencies. **It belongs to class E with an Alpha sabine (α_w) = 15%**.

Thanks to its 3 mm fleece, it can also be **used for renovation of old walls to cover irregularities and cracks**.

Acoustic absorption curve



Class of Acoustic absorption: E with an Alpha Sabine coefficient (α_w) = 15% **According to the norm EN ISO 354 (2004)**
Results available on request.

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