

CSR report from Troldekt A/S:

Troldekt A/S reduces carbon footprint with new cement type

The combination of FUTURECEM™, a new cement type developed by Aalborg Portland, and the transition to renewable energy in its own production now enables Troldekt to supply acoustic panels that are carbon-negative during production.

In addition, after switching to a new paint recipe across its entire product range, Troldekt advanced to the best Cradle to Cradle category in material health in 2021.

Troldekt uses close to 100 per cent renewable energy at its own factory, and with the introduction of the new FUTURECEM cement type, the way has been paved for substantial reductions in the carbon footprint of the procured raw materials. This is the message in Troldekt's CSR report for 2021, which has just been published.

The new acoustic panels based on FUTURECEM were launched in March 2022. Troldekt developed the panels in 2021 – and produced the first test variants using a total of 40 tonnes of FUTURECEM, according to the report.

“With the new type of cement from Aalborg Portland, we can now offer panels that are carbon-*negative* when measuring production phases A1-A3 in the environmental product declaration (EPD),” says Peer Leth, CEO of Troldekt A/S.

“In 2022, we expect to replace a substantially larger share of the cement in our acoustic panels with FUTURECEM, which will help to further reduce our overall carbon footprint,” he continues.

97.8 per cent renewable energy at factory

The wood, which is the other raw material in Troldekt acoustic panels, absorbs CO₂ while the trees grow in the Danish forests. The absorbed CO₂ exceeds the emissions associated with manufacturing FUTURECEM at Aalborg Portland. And since production at the Troldekt factory in Troldhede is now based on 97.8 per cent renewable energy, the total carbon footprint for production is thus negative.

When factoring in the *entire* life cycle of the acoustic panel including construction (phases A4-A5 of an EPD), useful life (phase B1), disposal (phases C1-C4) and recycling (phase D), the total carbon footprint is 26 per cent lower for an acoustic panel based on FUTURECEM than for panels based on grey cement. This is documented by Troldekt's new Environmental Product Declarations (EPDs).

“We now have a Troldekt panel offering the same acoustic properties, fire protection and natural strength as our original panels, but which has a negative carbon footprint right up until it has to be disposed of or recycled after typically 50-70 years,” says Peer Leth, and he continues:

“We've been working strategically with the Cradle to Cradle design concept for ten years, and we're therefore able to document that our products can be recycled in the biological cycle as a soil improver and in the technical cycle as a raw material in new cement. This is already happening with our production waste, and projects are underway to overcome the logistics challenges associated with also recycling Troldekt panels as part of demolition waste.”

From Silver to Gold with new paint

A low carbon footprint is essential in sustainable building. As is material health, which guarantees that products are healthy for people and the environment *during* use – and can be safely returned to new cycles *after* use. In 2021, Troldekt – together with Masquelack – developed a paint type based on a newer and more sustainable conservation technology.

Thanks to the new paint, Trolldtekt has advanced to the highest level of material health certification – Platinum – under the Cradle to Cradle design concept. Since Trolldtekt is certified at Gold or Platinum level in the other four Cradle to Cradle categories, this has triggered overall Gold certification for the entire series of Trolldtekt acoustic panels.

“The switch to new paint recipes in 2021 represents a milestone in our ongoing CSR efforts. Getting here has taken a lot of development and testing, and we’re proud that we can now offer the market both painted and unpainted Trolldtekt panels with Cradle to Cradle Gold certification,” says Peer Leth.

FACTS: Highlights from Trolldtekt’s CSR report 2021

The CSR initiatives realised by Trolldtekt in 2021 included:

> **Optimised paint in production**

In 2021, Trolldtekt started using new and more sustainable paint recipes in production. This has paved the way for the entire range of Trolldtekt acoustic panels in natural wood/natural grey and painted in standard colours advancing to the highest level of certification (Platinum) in the Cradle to Cradle material health category – and to Gold level overall.

> **Acoustic panels based on FUTURECEM**

In 2021, Trolldtekt developed acoustic panels based on the new cement type FUTURECEM. Unpainted Trolldtekt cement-bonded wood wool based on FUTURECEM has a carbon footprint of -2 kg per square metre of acoustic panel during the production phases (A1-A3 of the EPD). For painted Trolldtekt panels based on FUTURECEM, the footprint during production is -1.0 kg of CO₂ per square metre.

> **Close to 100 per cent renewable energy**

In 2021, Trolldtekt’s production was based on 97.8 per cent energy from renewable sources. All electricity comes from wind power, and the heat for the drying process comes from Trolldtekt’s own biomass boiler.

> **Introduction of clear plastic foil**

In 2021, Trolldtekt developed a new type of packaging, which means that Trolldtekt acoustic panels are now delivered to customers on pallets wrapped in clear foil rather than white foil. Clear plastic makes it easier to recycle the foil.

> **Supporting the local community**

In 2021, Trolldtekt made a financial contribution towards Troldhede’s new activity area and the replacement of the speaker system in the local sports hall. Both venues are important gathering places for the citizens of Troldhede.

[Read Trolldtekt’s CSR report 2021 in full here.](#) *The English version of the report was uploaded to the UN in June as part of Trolldtekt’s membership of the UN Global Compact, a worldwide voluntary CSR initiative. Trolldtekt has uploaded a CSR report to the UN every year since 2010.*

FACTS ABOUT TROLDTEKT

- Trolldtekt A/S is a leading developer and manufacturer of acoustic ceiling and wall solutions.
- Since 1935, Danish wood and cement have been the raw materials used in the production process, which takes place in modern facilities in Denmark with a low environmental impact.
- Trolldtekt’s business strategy has been developed around the Cradle to Cradle sustainable design concept as the central element.
- Since spring 2022, Trolldtekt has been part of the Irish Kingspan Group, which supplies highly efficient building materials to the global construction market – with operations in more than 70 countries.

FURTHER INFORMATION:

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