

# RECYCLING INSTRUCTIONS

## for Trolldtekt cement-bonded wood wool

### NATURAL RAW MATERIALS AND CRADLE TO CRADLE CERTIFICATION

Trolldtekt cement-bonded wood wool is made of 100 per cent natural materials: wood and cement. We offer PEFC™-certified or FSC®-certified Norway spruce (FSC® C115450). Both certifications guarantee that the wood comes from responsible forestry operations.

The production of Trolldtekt panels uses only cement from Aalborg Portland, which extracts the raw materials from the Danish subsoil with the least possible environmental impact. Chalk and sand are the main raw materials used to make Portland cement.

The entire range of Trolldtekt cement-bonded wood wool panels – including Trolldtekt agro and the non-combustible Trolldtekt A2 panel – are Cradle to Cradle-certified in the silver category. Consequently, we have complete documentation of the substances in the products, and documentation that the products can be composted and safely returned to nature as a soil conditioner. The cement in Trolldtekt's acoustic panels boosts oxygen levels during the composting process, while the wood adds organic material to the compost.

### RECYCLING OF PRODUCTION WASTE

In the past, we handled our production waste as a single waste fraction. However, in order to derive the greatest possible value from the resources in our production waste, we are now separating the waste into several different fractions, which are utilised in various ways. This approach enables us to test and try out different solutions in both the biological and the technical cycle. The long-term aim is for a number of these solutions to be rolled out

to include building site and demolition waste, including old Trolldtekt panels (end of life).

In the biological cycle, we are working with different solutions that will give our cement-bonded wood wool waste yet another function – or life cycle – before ending its days as soil conditioner.

### RECYCLING OF CONSTRUCTION WASTE FROM BUILDING SITES

Trolldtekt waste from building sites in the form of clean offcuts and waste can also be reintroduced in the biological cycle without any problem. Here, the only challenge is finding players in the industry who can see the potential in building a healthy business model on this basis.

### RECYCLING OF DEMOLITION WASTE

Trolldtekt cement-bonded wood wool has a very long lifetime – approx. 50-70 years – and today the old cement-bonded wood wool panels cannot be safely returned to nature. This is because comprehensive environmental screening is required to establish whether the panels have, for example, been surface-treated during use. In 2018, we launched a pilot project together with Aalborg Portland, where dust from our edging workshop is used in the production of new cement. The wood content of the Trolldtekt dust contributes to the combustion process (energy), while the cement content becomes a raw material in new cement. The dust is transported to Aalborg Portland cement in the cement lorries that would otherwise be returning empty after delivering cement to the factory in Trolldhede.

Cement production is a thermal process, which renders harmless any surface treatment of old panels, and in the long term, the solution will therefore also be suitable for Trolldtekt demolition waste. We

are working to find similar business partners on selected European markets.

Until this solution can be rolled out to also include demolition waste, we recommend that Trolldtekt waste is burned in incineration plants designated by the recycling centre.

There are considerable environmental benefits to be gained from maximising the lifespan of the panels. And from reintroducing the panels in the biological or the technical cycle rather than sending them for incineration.

Incineration is, however, an option in cases where landfill is the only alternative. From an environmental point of view, landfill will always be the least attractive option when disposing of Trolldtekt panels that have reached the end of their lifespan.

Contact the local recycling station/receiving station.

**REUSE**

Troldtekt does not facilitate the reuse of used acoustic panels, but the panels are very sturdy and are often installed using screws, which makes uninstalling them very straightforward, and there is considerable potential for reuse.

**TAKE-BACK SERVICE AGREEMENTS**

In connection with project deliveries, Troldtekt offers service agreements under which it will take back Troldtekt panels supplied when a customer purchases new Troldtekt acoustic panels. However, the arrangement is conditional upon the user agreeing not to surface-treat the panels during use, and on the service agreement being filed together with the building's operation and maintenance documents.

So far, the service agreements are only being offered on the Danish market.