Troldtekt®
Acoustic Solutions since 1935
By Kingspan

Troldtekt® design

Data sheet

TROLDTEKT® DESIGN

Troldtekt design panels are made of wood and cement. The product consists of wood (spruce), which is shredded into wood wool and mixed with cement. Customers can choose whether they want their Troldtekt acoustic panels to be FSC® (FSC®115450) or PEFC™-certified. Both certifications guarantee that the wood comes from responsible forestry operations and other controlled sources.

Troldtekt design panels are surface-treated. Due to the nature of the material, colour variations will occur in natural wood and natural grey panels. These colour variations are most evident in the natural grey panels, where the colour of the Troldtekt panels derives solely from the cement.

To achieve an even distribution of the colour tones, we recommend mixing the panels during installation.

Factors affecting colour variations include the water/cement ratio, the water content of the wood, the drying rate, steam curing and curing humidity.

Troldtekt design panels are suitable for commercial, industrial and residential builds.

PRODUCT STANDARDS, LABELLING AND CERTIFICATION

CE-marking

Within the EU, all building materials are legally required to be CE-marked. The CE-mark indicates that the building material can be legally sold and that it complies with the product standard to which the mark refers. Troldtekt products are CE-marked, and in addition to the marking we state:

Name of producer:
Troldtekt A/S
Sletvej 2a
DK-8310 Tranbjerg
Denmark

Certifications:
0615–CPR–222958G
0615–CPR–80474G

Product standard number:
EN 13168:2012+A1:2015
EN 13964:2014

Declaration:
See product data on page 2

Other approvals

Cradle to Cradle: Troldtekt is Cradle to Cradle-certified at Gold level. Troldtekt acoustic panels are documented as being free of harmful substances and can therefore safely be returned to the biological cycle. Additionally, waste from the production of Troldtekt acoustic panels is returned to the technical cycle and used as a resource in new cement at Aalborg Portland.

Indoor climate labelling: Troldtekt is indoor climate-labelled in the best degassing and particle release categories.

M1 classification: Troldtekt is M1-classified by the Finnish Building Information Foundation RTS sr. This is the best category, and means that the panels have an extremely low emissions level for volatile organic compounds (VOC).

PEFC and FSC: Troldtekt is PEFC™ and FSC®-certified (FSC® C115450), which means that all our products are manufactured using wood from responsible forestry operations and other controlled sources. Customers can choose whether they want their Troldtekt acoustic panels to be FSC or PEFC-certified.

Light reflection: Light reflection for different types of Troldtekt panels (measured by DELTA/Force Technology):

Troldtekt white 101	70.8 %
Troldtekt natural wood	55.2%

Limitations:
- Must not be used as a structural component.

- Not suitable for surfaces subjected to frequent rubbing or physical contacts.

- Separation or protection must be provided to Troldtekt acoustic panels from heat sources such as fireplaces, flues and chimneys.

- Each panel weighs over 7.5kg. Specific fastening method to satisfy seismic requirements is required when used in suspended grid systems.

SPECIFICATION GUIDE - TROLDTEKT DESIGN PANELS

The ceiling and/or wall lining shall be manufactured by Troldtekt A/S and shall be installed in accordance with Troldtekt installation instructions.
Troldtekt design panels [_ _] mm thick

USE AND MAINTENANCE

Troldtekt design panels usually require no subsequent care. However, we recommend regular cleaning along with other surfaces – and otherwise as required. The panels are easy to clean using a vacuum cleaner with a brush nozzle. If vacuum-cleaning is not sufficient, the panels can be wiped with a slightly damp cloth. If you want to paint the Troldtekt ceiling, use a hand sprayer. Water-based paint does not reduce the sound-absorbing properties of the panels.

REUTILISATION

The entire range of Troldtekt's cement-bonded wood wool panels is Cradle to Cradle-certified at Gold level. Consequently, we have complete documentation of the substances in the products, and documentation that the products can be composted and safely returned to the biological cycle as a soil conditioner. The cement in Troldtekt panels has a high lime content, which helps to neutralise the acids produced during composting. The wood in the Troldtekt panels is organic material, and helps to prevent the compost from compacting, thereby enhancing oxygenation during the composting process. In this way, carbon and nutrients are recirculated in the biological cycle.

TOLERANCES

Troldtekt consists of the natural material wood in combination with cement extracted from Danish mineral resources. The mix of these materials – wood wool and cement – inevitably results in slight variations in the panels. Panel dimensions and weights remain inside the tolerance indicated at 23+/-2°C and 50+/-5% relative humidity. However, inappropriate storage and lack of acclimatisation can affect the dimensions and weight of the panels. It is therefore important that you observe the installation, storage and acclimatisation instructions carefully.

PRODUCT DATA

The table below indicates the tolerances declared by us in accordance with EN 13168, which is the standard for cement-bonded wood wool and double-layer panels with cement-bonded wood wool, and EN 13964, the standard for suspended ceilings.

Product Properties and Performance

DIMENSIONS (mm)

Product name	**T**	**W**	**L**
Line	35	600	1200

TOLERANCES

Length (mm)	> 1250 : ±2.0
	≤ 1250 : ±1.0
Width (mm)	±1.0
Thickness (mm)	Length > 1250 : ±2.0
	Length ≤ 1250 : ±1.0
Weight %	±10
Perpendicularity (mm/m)	±≤2
Planeness (mm)	±≤3

FIRE

Reaction to fire acc. to ISO 5660-1:2015	Group 1-S

WEIGHT (ultrafine structure)

Product name		
Line	14.7 kg/m²	15.7 kg/m²

SUBSTANCES

In accordance with EN 13168:2012+A1:2015 and EN 13964:2014	
Chloride	≤ 0.06
Formaldehyde	E1*

SUSPENSION

Declaration in accordance with
EN 13168:2012+A1:2015 and EN 13964:2014

* No measurable formaldehyde emission

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