

Technical data

PRODUCT – TROLDTEKT PLUS-MINERAL WOOL

Troldtekt Plus is a double-layer panel made from one 25 mm or 35 mm layer of Troldtekt acoustic panel and one 18 mm (or 40 mm) layer of mineral wool. The mineral wool panel is covered with non-woven material, and the two panels are glued together with a non-toxic PVA adhesive.

Troldtekt acoustic panels are cement-bonded wood wool panels made from

wood and cement. The product consists of wood (spruce) which is shredded into wood wool and mixed with cement. We use certified wood – FSC® or PEFC™ – guaranteeing that it can be traced back to responsible forestry operations.

Troldtekt can be surface-treated, but is often used untreated (natural wood and natural grey). Due to the nature of the

material, colour variations may occur. These colour variations are most evident in the grey panels, where the cement gives the panels the grey Troldtekt look.

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

PRODUCT STANDARDS, LABELLING AND CERTIFICATES

CE marking

CE marking of building materials is required by law in the EU. The CE mark indicates that the building material in question can be legally sold and is in correspondence with the product standard to which the mark refers. Troldtekt products are CE marked, and in addition to the marking, we state:

Name of the producer:
Troldtekt A/S

Certificate numbers:
0615 – CPD – 222958G
0615 – CPD – 804474G

Product standard number:
EN 13168 and EN 13964

Declaration:
See product data on page 2.

Other approvals

Indoor climate certification: Troldtekt is certified to the best indoor climate categories by the Danish Indoor Climate Labelling (*Dansk Indeklima Mærkning*)

Ball impact certification: A wide range of structures with Troldtekt acoustic panels have been tested and certified for use as ceiling and wall cladding in sports facilities in accordance with 'Prüfung der Ballwurfssicherheit, DIN 18032 Teil 3, Sportshallen für Turnen und Spiele' (requirements and testing of ball impact safety, DIN 18032, Part 3, sports facilities). EN 13964 also includes ball impact certification as a parameter, and here Troldtekt is classified as Class 1A.

International approvals:

SP Sitac – Sweden
Nemko – Norway
Komo – Netherlands
MK – Denmark

Light reflection

Light reflection for different types of Troldtekt panels (measured by DELTA Light and Optics):

Troldtekt white 101	70.8%
Troldtekt natural wood	55.2%
Troldtekt natural grey	26.3%

USE AND MAINTENANCE

Troldtekt panels usually require no subsequent care. However, we recommend regular cleaning along with other surfaces – and otherwise as required. Light cleaning of the panels is easy using a vacuum cleaner with a brush nozzle. If vacuum-cleaning is not sufficient, you can wipe the panels

using a well wrung cloth. If you subsequently want to paint the Troldtekt ceiling, you can use a long-haired paint roller or a hand sprayer. Water-based paint will not negatively impact the sound-absorbent properties of the panels.

RECYCLING

Troldtekt cement-bonded wood wool panels can be composted and returned to nature as a soil conditioner. The cement in Troldtekt's acoustic panels boosts oxygen levels during the composting process, while the wood adds organic material to the compost. Production waste from our factory in Troldhede is delivered to HedeDanmark a/s, which receives, treats and refines waste products to make soil conditioners.

Like production waste, clean Troldtekt waste from building sites in the form of

offcuts and waste from Troldtekt acoustic panels can be safely returned to nature as soil conditioner. We are working to find similar business partners on selected European markets.

Cement-bonded wood wool demolition waste can instead be recirculated in the production process as a raw material in new cement. Cement manufacture is a thermal process which renders any surface treatment harmless. The wood content of the cement-bonded wood wool panels con-

tributes to the combustion process (energy), while the cement component becomes a raw material in new cement. Together with Aalborg Portland, we are working to offer this solution in Denmark from 2018 or 2019. Troldtekt is working to establish similar partnerships in selected markets.

You can find recycling guidelines at
> www.troldtekt.com

TOLERANCES

It is important to note that Troldtekt is a natural material and the very nature of the material composition – wood wool and cement – will incur small 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 could alter panel dimension and weight. 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, the standard for cement-bonded wood wool and double-layer panels with cement-bonded wood wool, and EN 13964, the standard for suspended ceilings.

Properties:

DIMENSIONS	
Width (mm)	600
Length (mm)	600/1200/2400
Thickness (mm)	43 53 65 75 (25+18) (35+18) (25+40) (35+40)
Weight (kg/m ²)	
Fine	11,0 13,3 12,5 14,8
Ultrafine	11,9 14,6 13,4 16,1
Extreme fine	13,0 15,5 14,5 17,0
TOLERANCES	
Length (mm)	≥ 1.250 : ±2.0 ≤ 1.250 : ±1.0
Width (mm)	±1.0
Thickness (mm)	Length ≥ 1.250 : ±2.0 Length ≤ 1.250 : ±1.0
% by weight	±10
Perpendicularity (mm/m)	±≤2
Planeness (mm)	±≤3
HEAT	
Lambda value W/m·K	0.051 (43 mm) 0.054 (53 mm) 0.045 (65 mm) 0.047 (75 mm)

FIRE	
Reaction to fire	B/s1/d0
IMPACT RESISTANCE	
Ball impact certification	1A
SUBSTANCES	
Chloride %	≤0.06
Formaldehyde	E1*
INDOOR CLIMATE	
Degassing	10 days
Particle release	Low
STANDARD	
Declared in accordance with	EN 13168 EN 13964

* No measurable formaldehyde emission

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