

ESTONIAN REED BOARD

UKU INFO SHEET

Reed board is a heat and sound insulating rigid construction board made from natural reed. Reed straws are compressed parallel to each other and sewn into a strong board with zinc wire. The quality of the product is monitored and controlled by the manufacturer (the reed is evaluated and sorted before being pressed into a plate, and the finished product is also checked, from which scrap is removed before storage).

Reed boards are available in the following sizes:

Code	Thickness cm (+/- 5%)	Width cm	Length cm (+/- 5%)	Weight kg (+/- 30%)	Boards on pallet
Board 5	5,0	75	200	9	80
Board 2,5	2,5	75	200	5	120

NB – Board thickness is measured wire to wire.

It is possible to produce boards in widths of 60cm, 90cm and 150cm and lengths more than 2m. Ask a quote for different widths. Production of reed boards is located in Estonia, by Lake Võrtsjärv.

Reed boards are suitable for use as a base material for plaster both indoors (walls, ceilings) and outdoors (walls), having very good thermal and sound insulating properties. They can be used on a flat or rough solid wall, a hewn or unhewn log wall, as well as a lining on a frame wall or beams. Reed boards can be used to design and cover even curved surfaces.

Reed board is an effective alternative to plasterboard. Reed board has been used in construction for centuries and is a health and environmentally friendly material. In terms of primary energy content per 1 cubic meter of material, reed board is the most environmentally friendly insulation material (compared to linen felt, cellulose wool, stone wool and glass wool) (Kätlin Kallas, 2006).

Reed board is particularly suitable as a base material for the use of clay and lime plaster in both renovation works and new constructions. If desired and suitable, reed tiles can also be left unplastered and displayed independently, so-called as a decorative element. For this purpose, we also prepare so-called decorative plates pressed from the best quality steel.

PHYSICAL PROPERTIES OF REED BOARD

- Density: 225 kg/m³
- Thermal conductivity: 0,055 W/mK (Construction Resources, UK)

INSTALLATION (SEE ALSO BELOW INSTALLATION ON A CONCRETE, LIMESTONE, COLUMBIA STONE WALL)

- When attaching reed tiles to the wall or ceiling, a 47 cm pitch of the truss or purlin as a base surface is recommended (under each reed tile there must be a possibility of fastening under the extreme wires).
- The reed boards must be placed closely side by side, if necessary tap the edges tightly with a piece of board and a hammer.
- The edges of the reed plate can extend beyond the base surface (e.g. reeding) by a maximum of 10 cm.
- The stiffness and strength of the base surface must be consistent and in accordance with their location and task in the building structure.
- Reed boards must form a single, monolithic and rigid whole with the base.

1. CUTTING

- Reed board can be cut with a hand or chainsaw and a disc cutter, the wire must be cut with pliers.
- When cutting the board lengthwise, you must leave a min. 2 cm of space between the edge of the board and the wire seam to prevent the wire from slipping and breaking the connections.
- When cutting the board crosswise, the connections of the wire seams should be interrupted at the necessary place.

2. FASTENING

- Fastening is done in 15 cm increments, along the wire seam holding the reed board together. One plate requires 12-20 fasteners. Cane boards can be attached to the base:

1. with nails - by turning the head of the nail back over the wire seam of the board, (for a 5 cm thick board, the min. length of the nail is 9 cm; for a 2.5 cm thick board, the min. length of the nail is 7.5 cm)
 2. with a screw - using additionally wide washers (diameter min. 2 cm) or steel assembly tape with holes
 3. with long staples - using an electric staple gun
 4. with wool dowels - a very effective solution for a stone wall
- In the case of cut boards, if necessary, the seam wire of the slab near the cuts can be tied and weave between and under fasteners.

SAFETY

- When cutting and installing the reed plate, there is a risk of injuring yourself with protruding wire ends.

FINISHING

- The reed binds the base layers of the plaster very effectively and securely. One base coat is usually enough.
- To achieve an exemplary result, the joints between the tiles should be covered with a mesh or coarse fabric.
- You don't need to wet the reed tiles when you start plastering, but you can.

DAMAGE INSURANCE

- Normal precautions are sufficient to prevent damage to reed boards during transport, storage and installation.
- Weak corners and sides need more protection and attention.

STORAGE

- Reed boards should be stored flat until use to prevent deformation of edges and corners.
- Should be stored on a base (raised from the ground), protected from moisture.

MOISTURE

- Short-term exposure to moisture does not cause a decrease in the quality of the reed.
- The reed is damaged by prolonged contact with water or if the reed board is used unfinished in a wet/humid environment.

VOLUME CHANGES DUE TO TEMPERATURE/HUMIDITY

- The reed board is volume stable if used under normal conditions, so-called as part of a "breathable" wall structure.

RESISTANCE TO FIRE

- Reed board covered with a non-flammable plaster layer of at least 18 mm thickness is considered non-flammable (DIN 4102). In Estonia, a base surface covered with 20-25 mm thick lime plaster or 25-30 mm thick clay plaster is considered to meet the EI-60 standard.
- As a decorative board it can be impregnated with colorless fire-stopping fluid SG2 Magna Firestop.

FASTENING TO REED BOARD

- Lighter loads can be carried by the reed board independently (with screws and dowels), larger loads and also in general it is advisable to fix through the reed plate, inside/side of the base wall.

INSTALLATION ON A CONCRETE WALL

It is most practical to attach the reed board to the concrete wall with the following means:

- With a concrete screw using a washer or a washer cut from perforated steel tape.
- HILTI X-IE wool nail fastening.
- Wool dowel with plastic nail.

INSTALLATION ON VARIOUS STONE WALLS

It is most practical to attach reed board to a stone wall using the tools listed below:

- Betoonikruviga kasutades seibi või perfolindist lõigatud seibi. (v.t. fotot ja selgitust)
- HILTI X-IE naelkinnitust (v.t. fotot ja selgitust)
- Using a washer or a washer cut from perforated tape with a lightweight concrete screw
- Wool dowel with plastic nail.

CONCRETE SCREW

According to the thickness of the reed board, screws of different lengths should be used, for a thinner board (2.5cm) a screw with a length of 50 mm and for a thicker board (5.0cm) a screw with a length of 85 mm is suitable. These concrete screws are 7.5 mm in diameter, hex head, 8 mm key size and the washer under the head is 11.5 mm in diameter. For installation, it is necessary to pre-drill a hole with a diameter of 6 mm. Perforated tape (with 8 mm holes) can be used instead of a washer, and ~36 washers come out of one running meter. It is easier and also a little cheaper to use ready-made washers DIN 9021 M 8 with an outside diameter of 24 mm.

HILTI NAIL FIXING

HILTI X-IE nail fastening. Depending on the thickness of the reed board, fasteners of different lengths should be used, for a thinner board (2.5cm) a nail fastener with a length of 25 mm and for a thicker board (5.0cm) a nail fastener with a length of 50 mm is suitable. The use of nail fasteners does not require any prior drilling of holes, but they can be shot directly into the wall.

WOOL DOWEL WITH PLASTIC NAIL

According to the thickness of the reed board, plastic wool dowels of different lengths should be used, for a thinner board (2.5cm) a dowel with a length of 70 mm and for a thicker board (5.0cm) a screw with a length of 100 mm is suitable. For installation, it is necessary to pre-drill a hole with a diameter of 8-9 mm.