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Lemix®
Hightech-Ton statt Gipskarton
INFORMIERT

Work Sheet - Clay Building Boards

1. Product description

Clay building boards made by Lemix are drywall panels perfectly suited for the entire spectrum of interior construction works.
They are perfect for interior walls, wall facings, lightweight partition walls, paneling of timer post-and-beam structures, ceiling and roof-slope coverings, both for new building projects and for the refurbishment of existing buildings, and for projects involving the preservation of historical monuments.
Lemix clay building boards are made of clay, sand, short-chopped straw, and fiberglass fabric on both sides.

Clay building boards offer a broad spectrum of positive characteristics:
• they regulate the air moisture
• they absorb smells and neutralize airborne pollutants
• they have a high capacity for storing heat
• they have excellent acoustic insulation properties
• they are permeable to water vapor
• they prevent the growth of mold

2. Technical specifications

Board dimensions	62.5 x 125 cm		
Board thicknesses	14 mm	16 mm	22 mm
Board weights	17 kg	20 kg	27 kg
Pallet contents	70 units = 54.7 sqm	60 units = 46.9 sqm	40 units = 31.2 sqm
Dimensional tolerances	Length x Width Thickness	< -5 mm < -2 mm	
Green density	1300 - 1400 kg/m³		
Thermal conductivity	λ (Lambda)= 0.47 W/mK		
Building materials class	A1 (non-flammable) in accordance with DIN 4102 Part 4		
Vapor diffusion resistance factor	μ = 5 / 10		
Acoustic insulation factor	61 dB for a 10-cm clay partition wall		
Article code	17 000 0014	17 000 0016	17 000 0022
Specific thermal capacity	approx. 1 kj (kg/K)		

3. Support structures

Walls:

- Dimension between center lines of the support structure:
  62,50 cm for a board thickness of 22 mm
  31,25 cm for a board thickness of 16 mm
- Installation with corrosion-proof bolts (e.g. Spax 5 x 50 mm)
- Installation with broad-back staples (width 26 mm; length 45 - 65 mm)
- A minimum of 12 fastening points per board; make sure to maintain a 2-cm edge clearance
- When installing the boards in joint areas, be sure to use bolted onnections with fastening plates
- Clay boards with a thickness of 14 mm need to be installed all-over on solid surfaces

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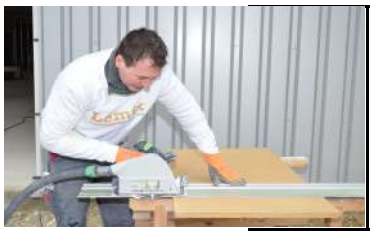
Ceilings and roof slopes:
- Dimension between center lines of the support structure 31,50 cm for a board thickness of 22 mm
- Board thicknesses of 14 / 16 mm require all-over support structures
- Installation with corrosion-proof bolts (e.g. Spax 5 x 50 mm) and fastening plates (e.g. Fischer HV36 insulation plates, galvanized & perforated)

4. Processing

Lemix clay building boards are suitable for cutting by jigsaw and circular handsaw, drywall saw, or cutter knife. When cutting the boards, make sure to also cut the reinforcement fabric on both sides.
Due to the dust generated during cutting, please be sure to wear a face mask and protective goggles.



5. Installation

The boards will be installed in formation, with a minimum offset of 25 cm between the plates.
Installation to ceilings roof slants will require the use of bolts in combination with washers.

Even wet rooms such as e.g. bathrooms benefit from the use of clay building boards thanks to their moisture-regulating properties. However, clay boards are not ideal for areas exposed to splash water and areas which should be tiled. Clay boards installed in wet rooms should be fastened with stainless-steel bolts.

Clay building boards are butt-jointed.
When gluing the boards with adhesive, make sure the understructure is firm, dry, and dust-free. The use of commercial construction adhesives recommended, although it should be noted that the use of a base coat will considerably improve the adhesive properties of the understructure. Use a notched trowel to apply the adhesive to the understructure and then press the boards into the layer of adhesive. Please note that clay boards mounted to timber understructures may be bolted or stapled only!

6. Fastening of objects

Installation pipes can be accommodated easily and without problems by drywall structures.
Recesses for socket outlets can be cut out with a hole saw and should be lined with a wood strip for extra reinforcement.
Screws with drywall anchors are normally sufficient for fastening lamps, pictures, or other lightweight objects. When installing radiators or cupboards, please be sure to use timber reinforcements or structural profiles in the understructure of the installation areas.

7. Surface treatment

Following the installation of the clay building boards, please treat their surface as follows:
• Joint reinforcement using 10-cm fiberglass fabric (with 4 x 4 mm minimum mesh size), spackled with clay-plaster finish.
• An easier, safer, and therefore more advisable method is the use of all-over mesh-filler in lieu of joint reinforcement. This safely rules out any risk of ridges caused by overlapping fabric strips.

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• Prior to fabric/joint reinforcement, slightly pre-moisten the clay boards without getting the boards too wet.
• After the spackle layer is completely dry, cover the entire surface with a 2-3 mm thick clay-plaster finish layer.
• In lieu of a fine-plaster top coat, it is also possible to use lime plasters. We do not, however, recommend the use of gypsum plasters.
• Ideal color finishes include clay paints or permeable paints which perfectly complement the positive indoor climate properties of clay as a building material.

8. Materials recommendations

Reinforcement fabric:
e.g. Sakret reinforcement fabric, width 100 cm, mesh size 4 x 4 mm

Finishing coats e.g.:
RYGOL Hydraulic-lime machine-applied plaster MKP 01
RYGOL Clay Base and Finishing Coat LGP
RYGOL Clay Finishing Coat LEF
RYGOL Lime Plaster KMP
RYGOL Historical Felt Putty HFS

9. Materials requirements

Clay building boards:	Wall surface to be covered minus the wall openings plus 5-10 % cutting waste
Reinforcement fabric: (joint reinforcement)	2.6 - 3.2 linear meters per sqm of surface
reinforcement fabric	Wall surface to be plastered + 10% for overlaps
Clay plaster:	Coating thickness 3 mm - application rate approx. 4,2 kg/sqm Coating thickness 10 mm - application rate approx. 14,5 kg/sqm

10. Design examples

New buildings
Use clay boards as interior construction boards for wall planking, notably for timber constructions

Old buildings/refurbishment projects
Modernize existing masonry by gluing or bolting on clay boards

Partition walls
Use clay building boards on both sides to create a customary drywall construction

Ceilings/roof slants
Use clay boards to increase the storage mass in attic extension projects and to enhance the indoor climate

Curvatures
Create curves with a radius > 1.5 m using 14-mm thick clay boards on planar understructures