

Written Specifications AcouClick Decor

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51. INTERIOR CLADDING SHEET FINISHES

51.00. Interior cladding sheet finishes – General

51.00.10. Description

All necessary supplies and works for the completion of lightweight interior constructions and cladding with sheet materials to a fully finished entire unit.

51.00.20. Reference documents

The provisions contained in the following documents apply:

- Technical information (TV) 159 from the Belgian Building Research Institute (WTCB): "Guidelines for the proper execution of painting" (May-June 1985)
- The WTCB's TV 233: "Lightweight internal walls" (Dec. 2007 (corr. Oct. 2009))

51.00.30. Preparatory information and measures

The execution of the lightweight partition walls and suspended ceilings shall be commenced only after the approval of the architect and in any case:

- After the completion of the first fix;
- After the installation of the window frames, external doors, and their glazing (or at least of the provisional closure of the openings) in rain- and windproof rooms and - if there is a risk of deformation due to moisture - only in a dry building: relative humidity of 50-60% and a temperature between 15 and 20°C;
- The contractor shall verify that the substrate is sufficiently level, square, dry, neat, stable, and cohesive, and shall make it suitable where necessary. If visible defects may give rise to poor execution quality, the designer shall be notified.

The contractor must familiarize himself with:

- The correct height of the finished pass;
- The baseboard height;
- The height of suspended ceilings;
- The presence of other wall finishes (wall tiles, paneling,)

The contractor must coordinate his intervention with the other finishing and engineering contractors. When affixing the cladding to one side, the contractor takes into account the technical installations already installed and create the necessary recesses. After this, he authorizes the installation of all utility pipes that need to be run through the walls. When affixing the cladding to the other side, he takes into account the finishing for these technical installations.

The sheets are stored dry, horizontal, and on a flat surface. The storage unit must be protected from damage (e.g.: mortar splashes, ...) at all times.

Deliveries are made without packaging and to order (to reduce cutting losses and surpluses). The materials and resources needed to protect the materials are reusable.

Measurement method: all preparatory information and measures are deemed as a contract expense and must be included in the various unit prices.

51.00.40. Preparatory works and (detailed) execution

Design

- The cladding sheet finishing must be carried out by a contractor or subcontractor specialized in this.
- Consideration should also be given to the sheet manufacturer's instructions, circular tapes, affixing materials and/or the underlying support structure.
- Affixing the entire unit to the supporting structures must be carried out in compliance with the contractor proposal. At the request of the architect, the contractor shall submit the necessary working drawings in 3D.
- The finishings and their affixing materials must withstand the various loads that will act on the entire unit. Consideration is given to structures suspended and attached to the finishing.
- The proper coordination of execution with other subcontractors must be ensured. The necessary recesses, reinforcements, etc. must be provided in consultation with the respective subcontractor, taking into account the required finish.
- Imperfections, such as around cable transits for technical installations, must be refinished.

Sanitary, electrical, and other pipes (these are to be installed by the respective contractors) shall be affixed in the core of the shell before the installation of the cladding sheets on the second side of the wall. The pipes must be distributed through the recesses provided for this purpose in the metal structure of the wall.

The electrical junction boxes and other components shall be affixed to the wall in compliance with the manufacturer's instructions without additional reinforcing brackets that are not recoverable. The switches and other appliances shall only be placed in the boxes after finishing the wall.

Where a door is to be incorporated into the lightweight wall, we have opted to install the door frame during construction of the walls. Before sealing the wall cladding on the second side, the door frame can be screwed down from the shell. The use of visible screw heads is not permitted.

51.01. Materials – General

The structure of the walls is divided into a structural core (hereinafter referred to as the 'body' of the wall), to which a specific finish (hereinafter referred to as the 'skin') can be applied. Different skins and accessories (profiles and baseboards) can be affixed to a particular 'body', so that a suitable wall construction can be provided for each specific situation, meeting e.g., the set circular, aesthetic, acoustic or fire-resistant requirements.

51.01.10. Body

51.01.10.01. METAL MODULES

General

The system consists of modules that combine to form a wall. The modules are constructed to ensure that the wall is adjustable in height without cutting or material loss, even when reused. The final finish ('skin') can be affixed to each of the modules either with removable tape or screws. The choice between the two fixing materials is based on use.

The structure complies with the European standard as described in ETAG 003 or as described by the Belgian Building Research Institute (WTCB) in TV 233 Lightweight Internal Walls.

| Standard | Class | Examples |
|------------------------------|---------------------|---|
| Eurocode 1: User Class | D | Residential buildings, offices, museums, schools, waiting rooms, retail stores, department stores |
| ETAG 003: User Class | III | Accessible zones where there is a limited demand for care and a real risk of misuse or accidents |
| ETAG 003: Installation Class | Type A | Partition walls |
| | Type B | Retaining walls |
| ETAG 003: Load Class | A | Heavy objects such as sinks, small shelves |
| | B (for screws only) | Very heavy objects such as boilers, large racks |

Measurement

Contract type: Pro Memory (PM). Included in the price of the walls.

Material

The system consists of galvanized steel (standard: S250GD - European Standard EN10025 - yield strength 250N/mm²) with a minimum profile wall thickness of 0.8 mm. The material is 100% recyclable at the end of its life.

The system does not preclude the use of conventional support structures in wood or steel. These can be connected seamlessly. This transparency allows certain complex building connections to be carried out with a custom solution. When executing combined systems, attention must be paid to the choice of materials so that, for example, the fire-resistant & acoustic properties can apply to the entire solution.

51.01.10.01.01. I-MODULE ('FILLER MODULES')

Properties

- The vertical sections of the I-profiles have a Σ -shape (sigma profile) for maximum acoustic attenuation.
- The module consists of 2 telescopic vertical profiles and 2 horizontal profiles (1 at the bottom and 1 at the top) which together form the letter 'I'.
- A click system ensures the correct positioning relative to each other. The distance between different modules has a fixed rhythm (center to center = 60 cm).
- The hinged connection between the horizontal and vertical parts allows for the absorption of unevenness in the ceiling or floor (standard NBN B03-003 = 3mm for 1 meter lath) and for the most compact transport of the module.
- The profiles also feature a number of properties that allow for smooth installation. First, markings are provided to mount the modules centrally on a laser line or marker line. In addition, holes are provided to facilitate drilling and/or screwing to affix the modules. Finally, punched holes of about 30 mm x 30 mm are present in the vertical profiles, which allow for the routing and distribution of utility pipes in the internal wall.
- The I-modules are available in various heights:
 - S: 700-1200 mm
 - M: 1600-2800 mm
 - L: 2000-3500 mm
 - XL: 3000-5500 mm
 - Customized solutions are always possible
- The I-modules are available in various widths:
 - 50 mm
 - 75 mm (standard)
 - 100 mm

51.01.10.01.02. C-MODULE ('START-STOP MODULES')

Properties

- Every wall solution starts and ends with this type of module.
- The module consists of 2 telescopic vertical profiles and 2 horizontal profiles (1 at the bottom and 1 at the top) which together form the letter 'C'.
- The horizontal profiles are affixed to the vertical profiles by a hinge connection, which allows them to be placed at any angle (e.g., sloping ceiling). During transport, the horizontal profiles are collapsed, creating a compact profile that is easy to distribute.
- The horizontal profiles of the C-module slide into the horizontal profiles of the I-module, allowing for any desired length dimension of the overall wall.
- The C-modules are available in various heights:
 - S: 700-1200 mm
 - M: 1600-2800 mm
 - L: 2000-3500 mm
 - XL: 3000-5500 mm
 - Customized solutions are always possible
- The C-modules are available in various widths:
 - 50 mm
 - 75 mm (standard)
 - 100 mm

51.01.10.01.03. D-PROFILES ('DOOR MODULES')

Properties

- This set is used for creating door and/or window openings.
- The set consists of a top profile that attaches to the ceiling and a base profile that forms the top of the door or window opening.
- The top profile has a length that exactly bridges 2 I-modules so that the cladding can be executed in the same cadence of 60 cm.
- C-modules are fitted to the left and right of the doorway. The top horizontal profiles of the C-modules fit into the top profile of the door set.
- The bottom profile is a telescopic profile, which means that any desired door width can be provided. It is affixed to the 2 C-modules placed to the left and right of the doorway.
- The D-profiles are also available in a version for double doors.

51.01.10.02. CIRCULAR TAPES

General

Depending on use, the cladding can be fixed to the metal support structure using circular tapes (referred to below as JUUNOO tape) or screws. The tapes always consist of a soft (loop) and a hard (hook) variant that interlock reversibly with exceptional strength. The tapes can absorb a shear force of at least 25 N/cm², certified by lab tests. The loop variant is always provided on the metal modules and the hook variant on the cladding.

Measurement

Contract type: Pro Memory (PM). Included in the price of the walls.

Mounting instructions

The tapes must be mounted on a dust-free, degreased surface, at a temperature above 20 °C and at a humidity between 40 and 60 %. After mounting, the JUUNOO tape must be pressed on firmly. The JUUNOO tape must be left for at least 24 hours before it can bear a load.

51.01.10.03. INSULATION

51.01.10.03.01. GLASSWOOL

General

Mineral wool insulation materials comply with the EN 13162 - 2013 standard: Products for thermal insulation of buildings - Products manufactured from mineral wool (MW) - Specification.

Measurement

Contract type: Pro Memory (PM). Included in the price of the walls.

Description

The thermal, acoustic, and fire-resistant insulation of the lightweight walls/ceilings is carried out with semi-rigid sheets of glasswool bound by a thermosetting binder. The cladding sheets are factory finished on one side with a polymerized glass fleece.

Properties

- Cladding sheet thickness: 50 mm
- Dimensions: 135 x 60 cm
- Thermal conductivity $\lambda_d = 0.037$ W/mK according to EN12667.
- Water vapor diffusion resistance factor $m = \text{approx. } 1.2$
- The cladding sheets are non-capillary, non-hygroscopic, dimensionally stable

- Fire reaction class A1 according to NBN EN 13501-1
- Specific calorific power c_p = approx. 1030 J/kgK according to EN12524

Design

The insulation is installed between the uprights that form the structure of the walls. The thickness corresponds to the previously mentioned thickness and to the manufacturer's acoustic report. If there are discrepancies between these data, the contractor must first contact the project designer.

The width of the insulation boards allows for optimal insertion of the boards between two profiles without having to cut them. For a structure with a smaller spacing (< 600 mm), the insulation is cut to size with a knife. The contractor must ensure that the insulation is cut perfectly evenly and linearly so that the space between the uprights is filled perfectly. To eliminate any risk of thermal bridging, the contractor must in principle ensure that no space is left between the boards and the uprights.

51.01.20. Skin

General

The 'skin' forms the external, visible finishing layer of the wall. This layer is placed on the 'body'; directly on the metal modules (see 51.01.10.01) or on the base carrier boards (see 51.01.10.04).

Measurement

Contract type: Pro Memory (PM). Included in the price of the walls.

51.01.20.02. COMPOSITE DÉCOR 'ACOUSTIC' PANELS (ACOUCLICK)

Design

These panels are composed of 2 separate panels:

- A melamine faced snap panel as described in 51.01.20.01
- An MDF carrier board

The MDF carrier boards are laminated with the melamine faced snap panels by the manufacturer using acoustic adhesive. This adhesive makes the entire unit of boards bendable so that a composite panel is created. Due to the increased mass of the panel and its composition from two different panels, higher acoustic insulation values can be achieved.

The hook variant of the circular tapes (see 51.01.10.02) is applied to the MDF carrier board so that the composite panel can be fixed immediately against the metal modules (fitted with the loop variant of the circular tapes).

The thickness of the MDF carrier board is 8 mm. The width and height are matched to the décor panel that will be affixed to the front.

51.01.30. Accessories

General

The lightweight partition walls described can be aesthetically finished with baseboards and finishing profiles.

51.01.30.01. BASEBOARDS

51.01.30.01.01. ALUMINUM BASEBOARDS

General

Baseboards are provided to finish the connection between the lightweight partition wall and the floor.

Measurement

Per running meter (rm) per finished side wall.

Material

Extruded aluminum baseboard EN AW 6060 T6 quality, finished to your choice:

- Anodized (natural color aluminum)
- Lacquered RAL 9016 structure (white)
- Lacquered RAL 9011 structure (black)

Dimensions:

- Height: 50 mm
- Thickness: 2 mm
- Length: maximum 1 joint every 3 m

51.01.30.01.02. MDF BASEBOARDS

General

Baseboards are provided to finish the connection between the lightweight partition wall and the floor.

Measurement

Per running meter (rm) per finished side wall.

Material

MDF, with finish of your choice:

- Paintable
- Décor baseboards analogous to décor of melamine faced snap panels

Dimensions

- Height: 80 mm
- Thickness: 12 mm
- Length: maximum 1 joint every 2 m 40

51.01.30.01.03. REMOVABLE ADHESIVE (FOR BASEBOARDS)

General

Baseboards are provided to finish the connection between the lightweight partition wall and the floor. When disassembling the partition wall, it should be possible to remove the baseboard without damaging the partition wall or baseboard. The baseboards are supplied with double-sided tape already applied in advance with a cover sheet and textile strips for easy release of the tape afterwards.

Mounting instructions

The baseboards are pre-taped with double-sided tape. The wall should be made dust-free before bonding. The tape on the back of the baseboard is adhered to the tape of the adjacent baseboard by stretching a piece of tape so that a flap protrudes when the baseboard is adhered to the wall. The next baseboard is adhered over this protruding piece. At the beginning or end of each series of baseboards, depending on the architect's choice, a textile strip (loop) is provided that is connected to the double-sided tape. The size of the textile strip is approximately 10x10 mm.

Outside corners are always mitred. The connection joints under the baseboards are sealed with a silicone-based elastic sealant, the color of which is to be confirmed by the architect.

The baseboard can be removed by pulling the textile strip. This causes the double-sided tape to come off without leaving any damage or adhesive residue. The tape cannot be used again.

51.01.30.02. END PROFILES

General

When a partition wall to be constructed does not start or end against an existing wall or other structural element, the wall end will need to be finished.

51.01.30.02.02. MELAMINE BEAM

Measurement

Per unit

Material

Melamine faced wood chipboard, finished in décor to match the melamine faced snap panels.

Dimensions

- Height: Analogous to the height of the wall, seamless up to 2 m 80
- Thickness: 18 mm
- Width: Fits over the thickness of the wall to be finished + thickness of the baseboards

The end faces are finished with a matching ABS finishing strip.

Design

The melamine beam is affixed before the second side of the lightweight partition wall is sealed. In this way, the melamine beam can be screwed to the metal start-stop module (C-module) from the inside of the wall.

51.01.30.03. CORNER FINISHING

General

In order to optimize the acoustic insulation values of the lightweight partition wall, an airtight finish between the lightweight partition wall and the transverse walls and/or ceiling should be executed with care.

In case you opt for a 'skin' with snap panels, the corners can be finished with sealant or with a corner profile.

51.01.30.03.01. SEALANTS

General

Walls to be painted should be finished with a paintable acrylic sealant. Other walls are sealed with a neutral silicone sealant.

Description

- **Paintable acrylic sealant**
The sealant is repaintable with virtually all water-based and synthetic paints and prevents cracks and discoloration of the paint. Adheres perfectly to most substrates. Substrates must be clean, dry, free of grease and dust and load bearing.
- **Neutral silicone sealant**
The sealant hardens under the influence of humidity to a durable elastic rubber. The sealant joint remains permanently elastic, is mold, UV, water, and weather resistant and can be used in most situations without a primer. Substrates must be clean, dry, free of grease and dust and load bearing.

51.01.30.03.02. INTERNAL CORNER PROFILES

Measurement

Per unit

Material

Extruded aluminum profile with an asymmetrical T-shape, available in various designs

- Anodized natural color aluminum
- Anodized black
- Lacquered RAL 9016 white

Dimensions:

- 16x7x1.5 mm
- Length 2785 mm or 3500 mm

Design

The profile is affixed after installation of the snap panels in the joint between 2 snap panels placed in an inside angle of 90° by applying an MS polymer sealant on one side of the profile and placing it in the joint. This ensures that the profile is affixed to only 1 panel and there is still room for slack in the angle.

51.01.30.03.03. EXTERNAL CORNER PROFILES

Measurement

Per unit

Material

Extruded aluminum profile with a Y-shape, available in various designs

- Anodized natural color aluminum
- Anodized black
- Lacquered RAL 9016 white

Dimensions

- 30x23x1.5 mm
- Length 2785 mm or 3500 mm

Design

The two attachment panels (left and right of the external corner) are cut at 45° over the full height. The external corner profile is cut to height (subject to deduction of the height of any baseboard provided) and MS polymer sealant is applied on both sides. When the first corner panel has been placed, the external corner profile can be placed against this panel and the second corner panel can be placed. The corner profile will overlap and protect the sawn miters of the panels.

51.01.30.03.04. CEILING PROFILES

General

If a skin with snap panels is chosen, the corner between the wall and the ceiling can be completed with a finishing profile. A distinction is made between T-profiles and L-profiles. If the situation permits, this joint can also be finished with a permanently elastic sealant.

51.01.30.03.04.A. T-PROFILES FOR CEILINGS

Measurement

Per unit

Material

Extruded aluminum profile with an asymmetrical T-shape, available in various designs

- Anodized natural color aluminum
- Anodized black
- Lacquered RAL 9016 white

Dimensions

- 16x7x1.5 mm
- Length 2785 mm or 3500 mm

Design

The profile is affixed after mounting the snap panels in the joint between the ceiling and the snap panel that was placed at an angle of 90° using an MS polymer sealant.

51.01.30.03.04.B. L-PROFILES FOR CEILINGS

Measurement

Per unit

Material

Extruded aluminum profile with an L-shape, available in various designs

- Anodized natural color aluminum
- Anodized black
- Lacquered RAL 9016 white

Dimensions

- 16x10x1.5 mm
- Length 2785 mm or 3500 mm

Design

The profile is affixed after mounting the snap panels in the joint between the ceiling and the snap panel that was placed at an angle of 90° using an MS polymer sealant.

51.10. Lightweight partition walls

General

Below are several types of builds of lightweight partition walls, arranged according to a particular body (see 51.01.10) and skin (see 51.01.20), possibly supplemented by one or more accessories (see 51.01.30).

51.10.11: Enhanced acoustics décor

Structure

- Body:
 - Metal modules: as described in 51.01.10.01 – width 75 mm, fitted with circular tapes as described in 51.01.10.02 (loop variant)
 - Insulation: glasswool as described in 51.01.10.03.01 - thickness 50 mm
- Skin:
 - Composite acoustic snap panel: as described in 51.01.20.02
- Accessories: as described in 51.01.30 (make a selection)
 - 01.01: baseboards in aluminum
 - 01.02: baseboards in MDF
 - 03.01: sealants
 - 03.04.a: ceiling T-profile
 - 03.04.b: ceiling L-profile

Properties

- $R_w (C;Ctr) = 54 (-5;-12)$ dB
- Wall thickness: 116 mm
- Finishing grade: finished surface – no further finishing required (analogous to painted wall)
- Maintenance: washable with slightly damp cloth. No periodic painting required

Measurement

Per running meter (rm), according to the height of the wall:

- 51.10.11.a: Lightweight partition wall with enhanced acoustics and composite acoustic décor snap panels - height < 1m40
- 51.10.11.b: Lightweight partition wall with enhanced acoustics and composite acoustic décor snap panels – 1m40 <= height < 2m80
- 51.10.11.c: Lightweight partition wall with enhanced acoustics and composite acoustic décor snap panels – 2m80 <= height < 3m50
- 51.10.11.d: Lightweight partition wall with enhanced acoustics and composite acoustic décor snap panels – 3m50 <= height < 5m50