

# Installation manual



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## FITTING THE LHV IN VERTICAL/HORIZONTAL FORMWORKS (SHUTTERING)

The Installation of LHV Formliner on vertical / horizontal formwork must be done in accordance to the following order:

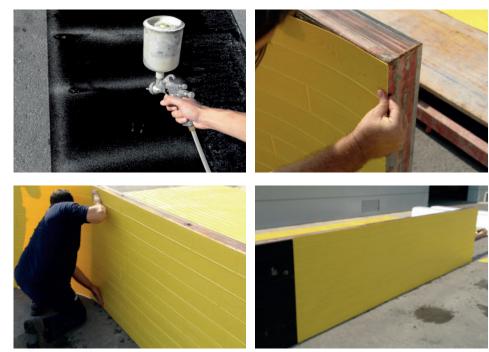
1.- Before proceeding with the placement of the LHV Formliner, you must check the absence of dust, grease, paint, loose material, etc... on the surface where the LHV Formliner has to be placed, in order not to hinder a correct fixing and fl atness.

2.- If it were necessary you can make an approach to LHV Formliner on the panels where it will be fixed, and cut it to the exact size.



3.- To fix the LHV Formliner can be used different techniques.

3.1.- Fix with Valero glue applied with air gun, the glue is sprayed on the perimeter of LHV Formliner and stripes, each one about 20/30 cms. After about 2 minutes, place the LHV Formliner on the formwork panel and press manually. The glue Valero acts on any surface, metal, wood, aluminium, etc...



Estimated performance of Valero glue:

- Spray can: approximately 1 can for every 2 sheets.
- Glue liquid can: approximately 0,10 g/m<sup>2</sup> applied with an air gun.

Note: In situations where the glue, in can format, is excessively thick or solidified, it can be diluted with 5% acetone to make it more liquid.

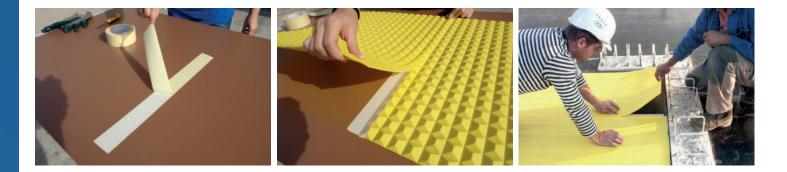
Valero



3.2.- Fixing with nails or staples, it is often commonly used when the formwork panel is made of wood and there's no problem to perforate with nails or staples. Applying a nail or staple approximately 10 cm it is advised along the perimeter of LHV Formliner.



3.3.- Fix with double-sided seal, depending on model. A doublé-side seal applied on the perimeter of LHV Formliner, and stripes is applied every 20/30, if required. Then, fix the LHV Formliner on the formwork panel.



4.- Remove the LHV Formliner. This is done easily done; simply pull it from either end. In case of glue residue, can be used solvent or similar product to clean the formwork panel.

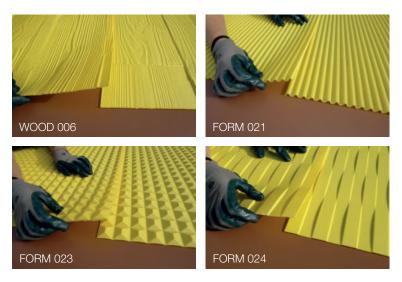




## **CONNECTION BETWEEN LHV FORMLINER SHEETS**

The joint between the LHV Formliner sheets will depend of the model texture chosen.

1.- Overlapping sheets, models 006, 021, 023 y 024...



2.- Overlapping frames, models 051, 052, 053, 055, 058, 059, 060...



3.- Connecting the profiles, rest of the models.





#### **JOINTS SEALED**

To seal the joints can be used different elements.

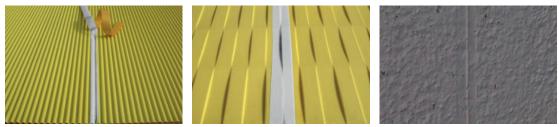
1.- Boost the connection trace by means of profiles.



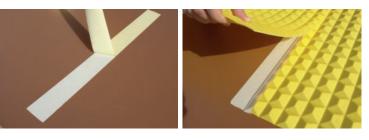




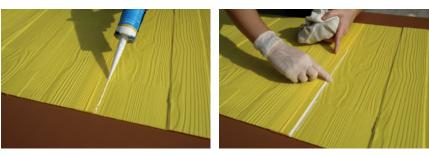
2.- Use Valero sealing tape, knowing that the mark will be registered in the finished concrete.



3.- Use a double-side seal, knowing that the mark will be registered in the finished concrete.



4.- Use specific silicone for sealing joints and contact with concrete, knowing that the mark will be registered on the concrete.



5.- Connect the sheets without sealing, knowing that the mark will remain in the concrete and the concrete could penetrate between the LHV Formliner and panel formwork.





#### FITTING "CROSSWALL"

The LHV Formliner drilling is inevitable to place the blades and their respective wall bushings. A quick and easy solution is the use the same blade preheated to make the drilling. Any other means, such as cutter, scissors, etc... can also be valid.



## STARTING WORK RECOMENDATIONS

We recommend Valero glue to fix the LHV Formliner sheet in any kind of formwork.

We recommend take off the formwork with the LHV Formliner in about 24/48 hours after the concrete is dumped. The fi nshed concrete could be damaged if the LHV Formliner is used a long time in contact with the concrete.

Do not expose the LHV Formliner sheet directly to the sun for a long time periods (24/48h).

The LHV Formliner sheet does not guarantee the fl atness, this is given by the formwork used. We recommend the use of formwork in good condition, and assembly minimizing the possible number and size of boards.

Do not uses release agents, it can damage the LHV Formliner sheet or the finished concrete.

The LHV Formliner sheet may vary of size up to 1 mm per meter per 10 degrees of temperature change.

## TOLERANCES

• Length ± 10 mm

• Width ± 5 mm