

LAMICOLOR[®]

HIGH PRESSURE DECORATIVE LAMINATES



LAMCO HPL COMPACT EXTERIOR GRADE

HANDLING

MACHINING

ASSEMBLY

LAMICOLOR[®]

Handling and Transportation

- Always transport the panels with proper means, such as forklift carriers, trucks, vans, ships, etc., so as to ensure their stability.
- Transport shall be done horizontally on flat, stable and whole pallets at least of equal size or bigger than the panels, taking care in securing laminates so as to prevent them from sliding.
- Always cover the material with a nylon or polyethylene film during transport.
- Make sure that the panels do not slide over each other during loading and unloading operations: lift the single panels by hand (two people at least. photo 1) or by means of a vacuum hoisting device (photo 2) with proper load capacity.
- No foreign substances of any kind must interpose between the panels in order to avoid scratches and/or bashes on the laminates surface.



Photo 1



Photo 2

Storage and conditioning

- Store the panels in a closed place. In the event of temporary storage on the building site, it's advisable to choose a sheltered place in order to avoid water stagnation between the panels. In the event of temporary storage outside, cover the panels with nylon, polyethylene or other waterproof sheets (photo 3).



Photo 3

- Stack the panels on a flat horizontal surface (vertical storage can result in permanent deformation), covering the outer panels with a protective layer (better if waterproof) photo 4.
- We recommend that the panels are conditioned at the job site to prevent anomalous behaviour especially in case of extreme weather conditions.



Photo 4

Cutting

- The cutting pattern must take into account the fibre direction (long side of the entire panel) because dimensional variations are different if they are considered in the fibre direction or orthogonal to the fibre direction (refer to Lamicolor compact technical data sheet for exteriors) See fig.1
- If the cut is made using a circular saw (which are the most used) the quality of the cut can be optimized working on:
 1. Type of blade: blades with tungsten carbide teeth (widia) or diamond blades are recommended.
 2. Blade feed speed : slow down the speed according to the panel thickness and to the desired cut quality.
 3. Peripheral speed depending on the blade diameter and on the number of rpm (revolutions per minute)
 4. Height of blade: lift the blade to improve the cut of upper edges and lower it to improve the cut of the lower edges.
 5. The panels front face (better face): if the cut is performed with fixed circular saws, the better face must be turned upward. Vice versa, if the cut is performed with portable circular saws, place the panels on a work surface with their better face down.
 6. Use an engraver to avoid splintering of the edges.
- Adjustment cuts can be performed directly on the building site, by means of portable saws such as a jig saw.

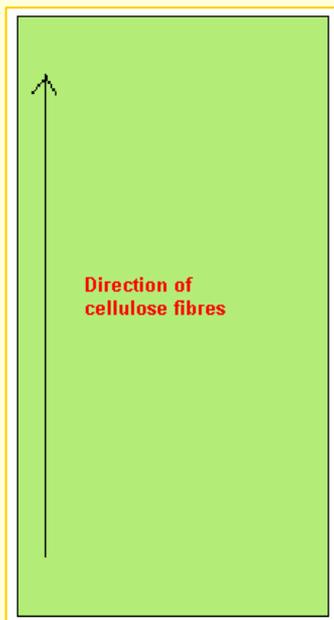


Fig. 1

**View from above of a
Lamicolor compact HPL
panel for exteriors.**

Edge finishing

Portable cutters are not recommended for edge finishing, except when minor adjustments are necessary on the building site.

The use of tungsten carbide tools with a rotation speed between 6.000 and 20.000 revolutions per minute is recommended.

The following operations should be performed to improve edge finishing:

- Chamfering⁽¹⁾
- Dressing with extra-fine abrasive emery cloth
- Polishing
- Application of a thin oily protective layer

(1) highly recommended for wooden designs.

Drilling

It's necessary both in through holes fixing and invisible fixing.

Ordinary portable or fixed drills can be used for this purpose with recommended rotation speed of approximately 1000 revolutions per minute.

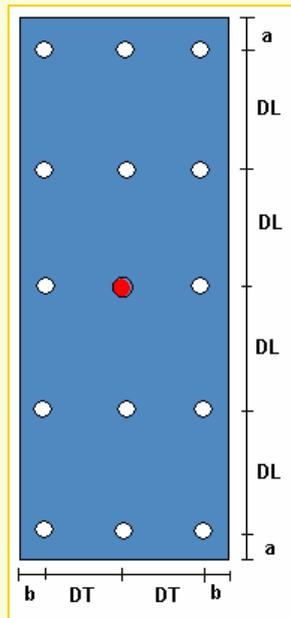
Ordinary steel bits can be used to drill 4 to 6 mm holes. The through holes diameter must be larger than that of the screw to be able to absorb dimensional variations.

Assembly systems

- **Visible fixing with through holes:** through holes diameter must be larger than that of the screw.
The difference between the two diameters should be calculated according to the size of the panel to be fixed to allow its dilatation.
On these concern please refer to Lamicolor technical data sheet and follow the indications about the maximum dimensional variation.
Panels must be directly screwed to the structure beneath.
- **Invisible fixing with self-tapping screws:** in this case holes are not through holes and are made on the back of the panel.
Pre-drilling is necessary and the hole diameter must be smaller than the external diameter of the screw, while the depth of the hole must be at least 1 mm longer than screw penetration.
With this system it is possible to place hooks of different type on the back of the panels according to the kind of hooking device present on the substructure: hanging, grooved etc.
- **Fixing with glue:** Lamicolor panels for exteriors can be installed also using specific glues guaranteed for this kind of application by the manufacturers who will supply recommendations regarding the type, quantity and methods for applying the product according to environmental conditions.

Assembly instructions

fig. 2



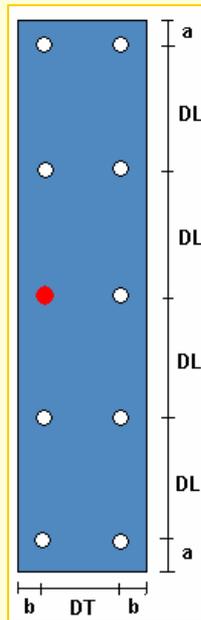
tab. 1

Thickness (mm)	DL max (mm)	DT max (mm)	a (mm)	b (mm)
6	550	400	20-40	20-40
8	700	500	20-40	20-40
10	800	600	20-60	20-60

- **Dimensional tolerance:** panels are supplied in industrial size. Before applying the panels they should be squared in order to obtain a perfect orthogonality of the angles.
- **Fixing:** it's advisable to insert a flexible bush between the hole and the screw. The head of the screw shall be later covered by a plastic cap of the same colour of the panel. When fastening with through holes, it is advisable to adopt the rule of one fixed point (in red in fig. 2 and 3) which allows uniform longitudinal and transverse sliding of the edges of the sheet at all times.
The fixed point hole will have a diameter a little bit bigger than that of the screw (enough for the insertion of the bush), while the other holes (sliding) will have a diameter at least 1,5 times bigger than that of the screw.
- **Fixing with three or more support points:** if the frame of the substructure and the width of the panels have been arranged to have at least three support points on the short side of the sheet, follow the instructions explained in fig. 2 and tab. 1

tab. 2

fig. 3



Thickness (mm)	DL max (mm)	DT max (mm)	a (mm)	b (mm)
6	400	400	20-40	20-40
8	550	500	20-40	20-40
10	800	600	20-50	20-50

- **Fixing with two support points:** if the frame of the substructure and the width of the panels have been arranged to have two support points on the short side of the sheet, follow the instructions explained in fig. 3 and tab. 2
- **Substructure:** whatever type of fixing is chosen, Lamicolor panels must always be fixed on a substructure which is already fixed on a wall. This substructure can be an aluminium or a wooden substructure (should this be the case, it will be necessary a treatment with anti-mildew and anti damp products).

The substructure profile shall be chosen according to the type of fixing that must be performed and shall be fixed to the wall preferably with stainless steel bolts.

Ventilation: always ensure a proper ventilation between the panels and the substructure. A valid system is that of the **ventilated façade**. In this case, a thermal insulator is applied on the wall besides the substructure. Between the insulator and Lamicolor panels is thus created a ventilated air space which allows a better thermal insulation of the building both during the summer and in winter, as well as a better protection of the walls from damp. Ventilated façades are applied both in new buildings and in building restoration.