



RECOMMENDATIONS

Recommendations:

MasterPanel offers our clients a technical department to support your designers and Project Management. Our building system section provides support from the initial concept of the project to the installation and subsequent maintenance.

This advice may include:

- Proposals for appropriate technical solutions for each project..
- Providing support regarding the cutting, quantifications of the panels and necessary accessories.
- Support and technical information for the training of fitters.
- We provide plans and sketches of the most common technical details.
- Technical support in the correct installation of our panels, forming a team with the Project Management.

TRANSPORT AND LOADING

- Panels must always be transported on flatbed vehicles.
- Panels will always be packed with polystyrene blocks at the base to avoid damage **(pict. 1)**.
- Panel stacks should never exceed 2.60 m. high (including polystyrene blocks, accessories, cover caps, trims, etc) **(pict. 2)**.

By truck:



1

2

< 2,60 m.

In containers:



20' DV

40' HC

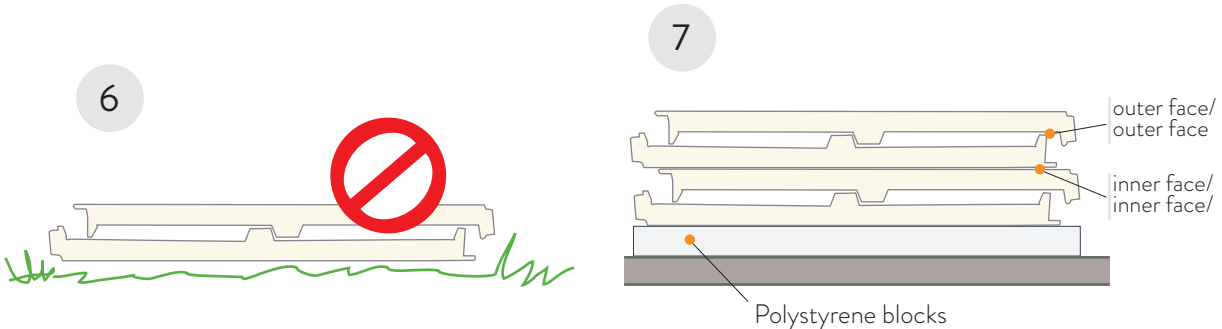
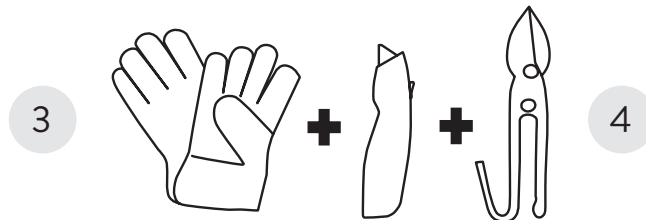


< 2,30 m.

HANDLING

Manual unloading :

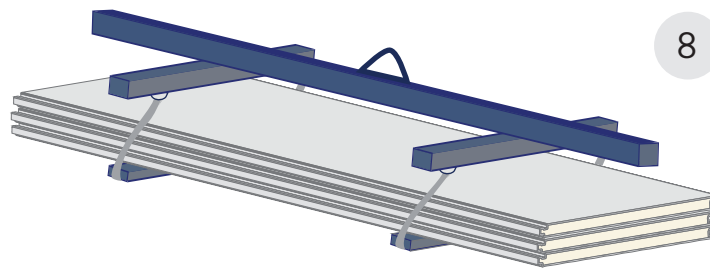
- The staff will always handle the panels with safety gloves **(pict. 3)**.
- Appropriate tools should be used to remove the panel packaging. **(pict. 4)**.
- The storage area must be defined in advance. Always store on a firm, level surface free of debris (see recommendations for storage).
- Always move panels one by one. The manipulation of the panel will be done by lifting them, they must never be dragged since the edges of the panel can cause damage to the next panel.
- Panels should always be moved while held in a vertical position. Auxiliary slings can be used **(pict. 5)**.
- The packages should never be stacked directly on the ground, vegetation or earth **(pict. 6)**.
- Panels will be stacked on site, one panel on top of the other and facing each other **(pict. 7)**.



Recommendations

Crane unloading:

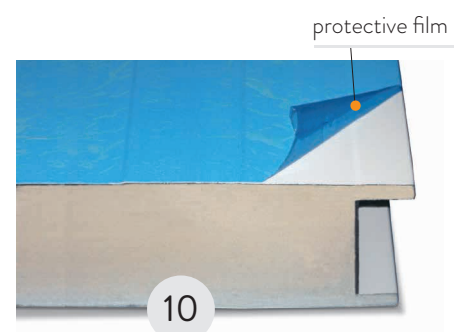
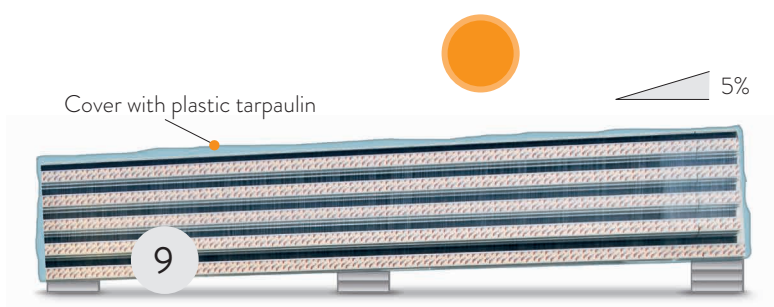
- Staff who handle panels should always wear safety gloves.
- The crane must be operated by a qualified person who holds the necessary permits and licences.
- We recommend you always use a balance beam cradle or unloading cradle. **(pict. 8)**.
- Panels should be lifted when held with slings, ensuring there is a minimum of two supports along the pack.
- We suggest that you place protection on the edges of the pack at the points where it is held by the slings, rigid spacers may be used with a length greater than the panel width.
- It is recommended to unload with at least 4 supports on panels longer than 8.00 m to limit the arrow of the panels.
- Metal chains should never be used as they can mark and damage the panels.



STORAGE:

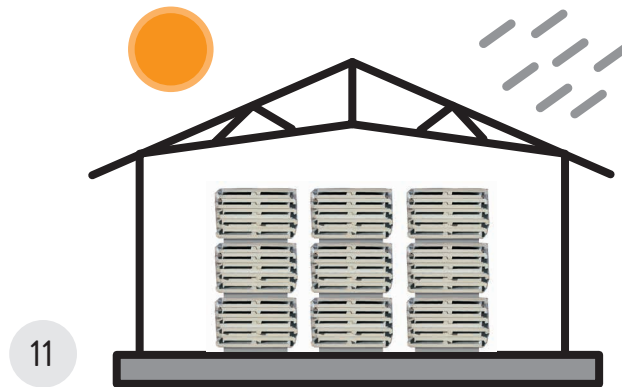
Short term:

- Packs and panels should never be stacked directly in contact with the ground or vegetation **(pict. 7)**.
- The storage area should be dry and ventilated.
- If covered storage is not possible, the panels should be stored with an inclination of 5% to avoid the accumulation of water in the package. Make cuts in the stretch plastic packaging so as to allow the escape of any water that may accidentally enter. Packages must be covered with waterproof material, canvas or plastic **(pict. 9)**.
- The protective film must be removed from the surface of the panel in a period not exceeding 15 days from their exposure to the elements **(pict. 10)**.
- Panel that are stored in packs are sensitive to moisture, condensation and rain. The water that accumulates between the panels could create zinc hydrocarbon on the surface, which in the case of prepainted panels will be seen as surface staining. To avoid this, place spacers between panels. Accumulated water can in turn damage the paint on the panels, causing it to peel.
- The stacking height should never exceed 2.20 meters.



Long term:

- Follow the short-term storage recommendations (except the third recommendation in the previous section). The storage area should be dry, ventilated and covered. Under no circumstances should panels suffer long-term exposure to the elements (**pict. 11**).
- Remove the stretch plastic wrapping from the panel packaging to prevent the accumulation of moisture, or condensation inside the package.



PANEL CUTTING:

1. Work tools::

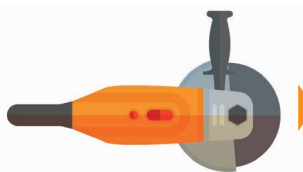
Operators must be equipped with the pertinent individual protection equipment (glasses, gloves, long sleeves...) Panel cutting must be done with the proper tools. Do not use tools that produce hot sparks. The use of inappropriate tools can cause delamination, causing long-term defects on the panel surface, such as blistering.

Suitable tools:



Fine tooth circular saw

Avoid the cut with:



Abrasive saws, grinders or similar



Jigs saw, saber or similar

2. Work surface

Panel cutting must be done on a flat surface.

The sandwich panel should never be used as a work surface for cutting another sandwich panel or other element. The remains of this cut can stay on the panel and lead to oxidation on the surface of the panel.

Recommendations

3. Cutting procedure

Masterpanel advises against cutting panels on site and cannot guarantee the performance of panels cut on site. During the cutting of the panel, its technical characteristics are modified, as well as, stresses and vibrations being transmitted, which can lead to long-term defects on the surface, such as blistering.

If the client requires the cutting of the panel on site, it is advisable to follow the following steps to avoid damaging the panel surface:

- 3.1 Place the panel on a flat surface.
- 3.2 Clean the area to be cut.
- 3.3 Determine the line of the cut.
- 3.4 Placing adhesive tape on the line of the cut is recommended in order to protect the surface and avoid scratches on it. Such tape must be removed prior to panel installation.
- 3.5 Cut along the previously determined line.
- 3.6 Clean the cutting area of any impurities, chips, etc.
- 3.7 Polish the edges removing burrs.

If the width to be cut is less than 50% of the panel width, it is recommended to cut the full thickness of the panel and remove the cut part before installing the panel.

When the width to be cut is greater than 50% of the width of the panel or when areas that may compromise the stability of the panel are removed before installation, it is recommended to proceed as follows:

- First, it is recommended to cut the inner face sheet and the foam to a depth of about 5-6 mm.
- Then turn the panel over and cut the veneer on the outer side and the foam to a depth of about 5-6 mm.
- Without removing the cut area, install the panel, fixing it to the structure as it has been designed.
- Once installed, use a utility knife to cut the foam from the cut area and remove.

In any case, after cutting the panel, the core should never be exposed. Therefore, the core must be protected by sealing systems, collars, finials, etc.

COATING REPAIR

When damage occurs during the handling of the panels that affects the coating, proceed as follows:

- **When the zinc coating is visible:**
 1. Clean the surface to be repaired
 2. Apply an epoxy-polyurethane type primer on the affected area
 3. Apply a coat of acrylic-polyurethane paint over the primer in the same shade as the repaired surface
- **When painting over pre-lacquered paint:**
 1. Clean the surface to be repaired.
 2. Apply a coat of acrylic-polyurethane paint in the same shade as the repaired surface

MAINTENANCE

Once the panels have been fitted on-site, a general cleaning should be performed. Be sure to remove all metal chips or burrs and any objects, metallic or otherwise, that may be on the surface, so as to remove possible focal points for the formation of rust. If necessary, use a mild household detergent without caustic soda.

Before starting any maintenance work, please remember that our roofing is not designed for frequent heavy walking, but just for walking on occasionally; always avoid stepping on flashings, ridges and any installed trim, always wear rubber-soled shoes and safety gloves; do not drag equipment or tools along the surface of the roofing..

- Inspect gutters and downpipes semi-annually.
- Carry out a general cleaning annually, including the skylights. If necessary, use mild household detergent, without caustic soda. Do not use brushes, metal scouring pads or other abrasive materials.
- Make an annual check on the condition of mouldings and trims, sealants and screw fittings that are exposed to the elements.
- Inspect the areas of sheet overlaps, the state of the sealant and of the screw fittings and, if necessary, reseal.
- If lightning conductors are installed, make an annual inspection of the condition of the installation.
- On panels with a polyester type paint finish, check the condition of the paint every two years. In special finishes, the first paint check should be carried out starting on the fifth year





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