



HANDLING INSTRUCTIONS



GENERAL CONSIDERATIONS

Product safety:

The information contained in these handling instructions must be taken into consideration.

Preparation:

The standard packaging of panel packs comprises:

- Rectangular-shaped supports made of expanded polystyrene.
- Wrap in shrink film.



PANEL UNLOADING

The client is responsible for unloading and handling the panels and will use appropriate means to limit any deflection of the panels. Before handling the packs, verify that the shrink film that secures them is mostly in good condition and preserves its consistency.

The rectangular-shaped supports of expanded polystyrene help to prevent the panels from being damaged when unloaded.

The client is responsible for verifying that the material specified in the carrier's documents (delivery notes and/or CMR if included) coincides with the material transported in the vehicle, checking the quantity, dimensions, condition of the panels, etc., so as to proceed to handle the packs without any risk.

If there is any anomaly or damage affecting the material, this must be reflected in the aforesaid carrier's documents.

INSTRUCTIONS LABEL

Handling and storage of the packs is a very delicate phase during which the panels can become damaged. For this reason, each pack has an adhesive label with a series of instructions, as follows:

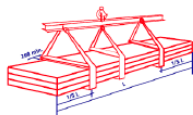
CAREFUL!

STRICTLY OBSERVE THE FOLLOWING INSTRUCTIONS FOR HANDLING AND STORAGE OF THE PACKS.

MANIPULACIÓN:

Alzar el paquete utilizando un balancín y eslingas de nylon de una anchura de 200 mm.

Colocar entre el paquete y las eslingas, tablones de madera de 200 mm. de ancho mínimo. Los tablones tendrán una longitud superior en 20 mm. a la del paquete que está manipulando.

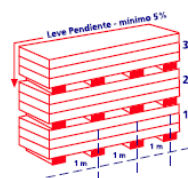


ALMACENAMIENTO:

Situar el paquete en una superficie plana y rígida, colocando cada metro como máximo un taco de porex o madera de 70 mm. de espesor y 250 mm. de ancho.

El paquete debe estar en una leve pendiente a fin de evacuar el agua originada por posibles condensaciones.

No se puede colocar más de tres alturas (paquetes) y siempre interponiendo entre ellos y en varios puntos, tacos de madera o porex.

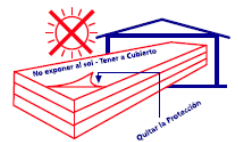


Guardar los paquetes a cubierto, si no es posible, proteger con una tela impermeable y ventilar adecuadamente.

El film que recubre la cara del panel se debe desprender en un plazo máximo de 30 días desde la fecha de fabricación del panel.

MONTAJE:

La eventual película protectora no debe estar expuesta a los rayos solares y se debe retirar completamente una vez instalado el panel.





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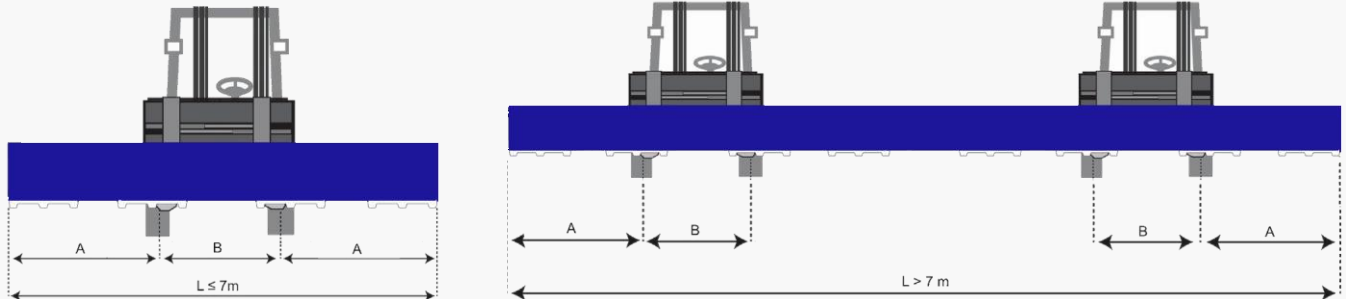


LATERAL UNLOADING AND HANDLING WITH A FORKLIFT:

The pack must be lifted and/or transported by the forklift's forks or prongs. The minimum supporting surface of the forks must be 12 cm wide and 120 cm long.

The separation between the supporting surfaces must be at least 1.50 m for packs measuring less than 7.00 m long.

For lengths of more than 7.00 m, extendable forks or two forklifts must be used, leaving a maximum overhang of 2.50 m between the last fork and the end of the panel.



- Distance between forks: $B \geq 1.50 \text{ m}$ $A \leq 2.5 \text{ m}$

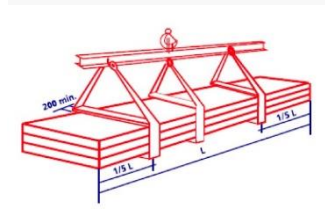
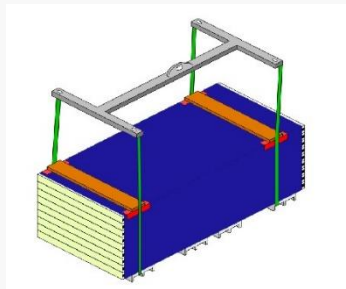
HANDLING AND UNLOADING WITH A CRANE:

For lifting with a gantry crane and slings with a minimum width of 200 mm, the packs must be protected using wooden panels or separators with a minimum width of 200 mm, to prevent the crushing force of the slings from damaging the packs during lifting.

These separators must be placed at the base and top part of the panel, and the use of edge protections to prevent scuffing of the panels is recommended.

For panels of more than 6 metres, a lifting beam must be used to avoid damaging the panel. The recommended supporting strips or points, based on panel length, are:

- Up to 6 metres: 2 strips
- From 6 to 9 metres: 3 strips
- From 9 to 12 metres: 4 strips
- From 12 to 15 metres: 5 strips

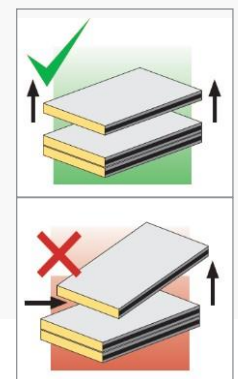
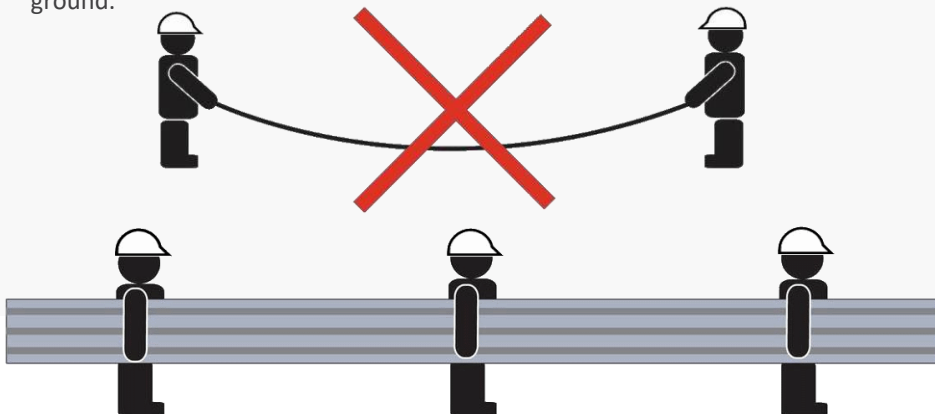


During unloading with a crane, the works will be signposted, and Occupational Health and Safety Regulations will be observed, avoiding the presence of personnel beneath suspended loads:

MANUAL HANDLING:

For manual handling of the panels on site, the following must be taken into account:

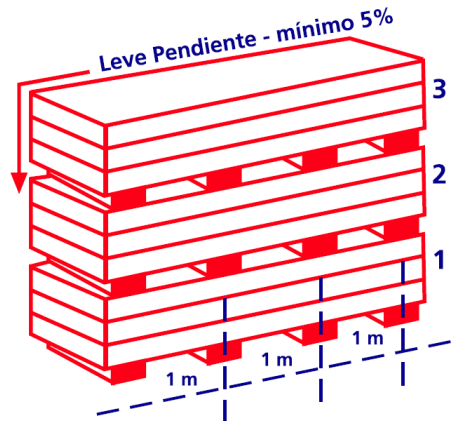
- Do not slide panels over each other.
- In the event of manual transport, hold the panel every 3 m as a maximum, transporting it in a position that is perpendicular to the ground.





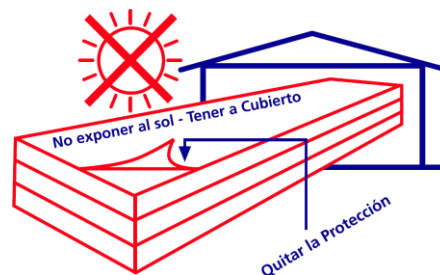
STORAGE

- Find a location on site requiring the least possible movement, so that material can be unloaded without damaging it.
- Place the pack on a flat and rigid surface, installing every metre at the most, a block of expanded polystyrene or wood 70 mm thick and 250 mm wide.
- Store the packs on the ground or directly on the roof (for roof panels) on a ventilated and slightly sloping surface (5%) to favour the flow of potential condensation and avoid the stagnation of any water. This will also prevent rainwater retention.



- No more than three rows (packs) can be placed on top of each other and the blocks of wood or expanded polystyrene must always be placed at several points in between them.

- Keep the packs below a roof, and if this is not possible, protect them with a waterproof fabric and ensure at all times that there is adequate ventilation. The protective film that the panels have in some cases on their outer face, inner face, or on both, must not be exposed to sunlight and will have to be removed within a period of 30 days from the panels' date of manufacture.



- The place for storing screws must be covered to prevent their deterioration.
- Be careful in handling the panel up to the place where it will be installed. Avoid potential collisions with obstacles in the way or resting the panel against places with protrusions that could pierce it.
- For safety, secure the unloaded material to avoid any problems due to strong winds.
- When the pack is situated on the roof structure, take care with the distribution of the weight on the structure and do not allow it to accumulate in just one sector.
- It is recommended that the product is not stored on site for more than one month counting from the date of delivery



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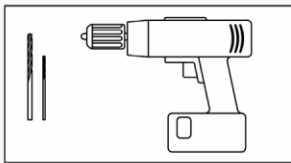


WORK TOOLS AND CUTTING TOOLS

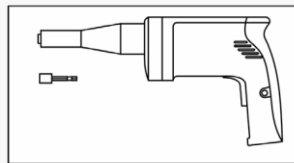
It is totally inadvisable to use the panels for structural purposes or to support constructive elements. For this reason, if complemented with heavy weights requiring a structural support, it is essential for this support to be the building's structure and not the panels.

Working tools:

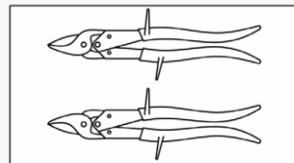
The instructions provided in the manuals for the different tools to be used during roof installation must be observed. At the same time, the appropriate personal and collective protective equipment must be used for the tools and site in question.



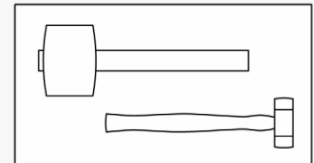
PORTABLE DRILL AND DRILL BITS



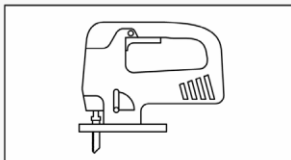
CLUTCH SCREWDRIVER
With reverse mode and depth stop With its corresponding hexagonal drive cups



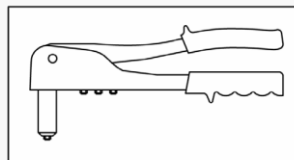
SHEET METAL SCISSORS
Specific model for cutting right Specific model for cutting left



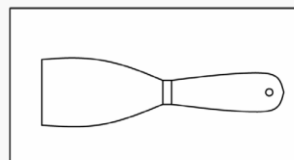
MALLET
With plastic or rubber heads



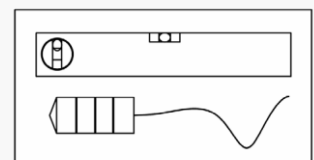
COMPASS OR RECIPROCATING SAW



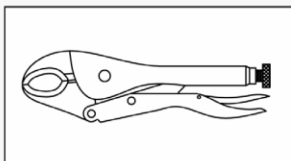
RIVET GUN
For rivets Φ 2 - 6 mm
With their corresponding rivets



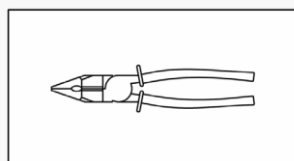
SCRAPER



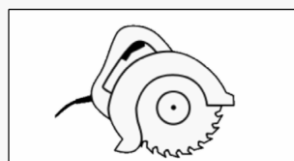
PLUMB AND LEVEL



WISE GRIP PLIERS



UNIVERSAL PLIERS

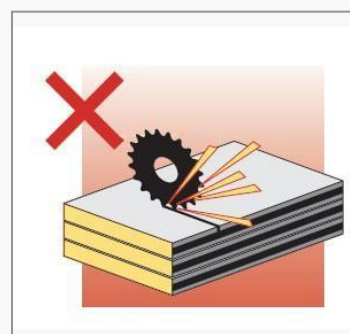
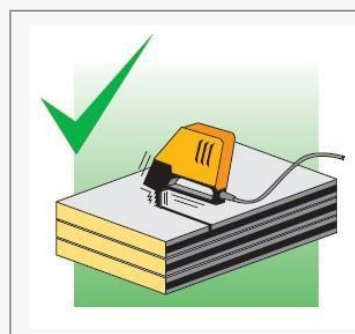


CIRCULAR SAW

Panel cutting:

Insofar as possible, avoid cutting the panels on site. A compass saw will be used with fine teeth or a cold cutting disk, ensuring that its cutting plane is perpendicular to the panel's metal sheet.

Protect the zone adjoining the cutting area to prevent any deterioration of the metal sheet lining. Do not use cutting tools that produce hot sparks.





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Cutting method:

Cutting line:

- Determine and protect the surface on which the cut will be made and place adhesive tape or masking tape to protect the panel's finished surface as much as possible.
- Draw on the tape using a marker, the guide line to be followed by the cut.

Cut execution:

- Check that the path line is correct and proceed to cut the panel using a vertical saw. If the full thickness is to be cut, make sure that the length of the saw blade is greater than the thickness of the panel. When cutting just one face (required for overlaps or in special installations) verify that the saw blade penetrates the insulating core to the required depth.
- Immediately after cutting, carefully clean the particles and metal shavings that may remain on the panel's edges and/or surface, because over time they can generate rusting points, damaging the paint. Use the vacuum, both in the workshop and in assembly zones, guaranteeing at all times that the panel surfaces are clean and free of cutting waste and metal particles.

Cut finish:

- If necessary, sand down the panel ridges until a perfect finish is obtained. Remove the tape from the surface and clean the panel leaving it ready for installation.

Cutting with straight or serrated saw:

The saw's cutting teeth must cut in an ascending direction and the panel must be placed with the outer face on the opposite side to the cutting surface, to prevent the tooth's cutting force from detaching the metal sheet from the foam.

Cutting with a circular saw:

The disk's teeth must be short and prepared for cutting metal sheet (diamond disk or similar). For cutting, the machine will be supported on the panel's outer face.

