

ECHOPANEL®

INSTALLATION GUIDE



This guide is presented in good faith to assist in the installation of EchoPanel®. It is not intended as an all-encompassing guide, and a professional qualified installer is recommended for optimum results.

Woven Image accepts no responsibility for installation actions taken or not taken. Please refer to Woven Image Pty Ltd. Terms of Trade.

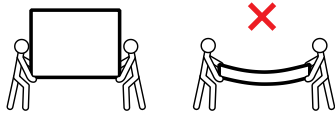
This installation guide contains only recommendations; if you have any questions about installation techniques please contact your distributor or Woven Image sales representative.

Please note:

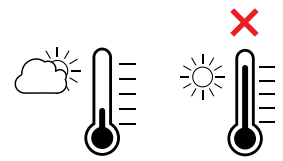
- Exact colour matching cannot be guaranteed between batches.
- Fibre mix and surface texture may vary.
- Please check that all panels are the correct design, colour, shape and batch number (if requested).
- Allow for thickness variations due to manufacturing tolerances and any minimal unevenness of substrate.
- EchoPanel® has an inherent grain direction. Stickers with the Woven Image logo are placed in the same corner of each plain panel to assist with correct panel orientation.
- No claims will be accepted after panels are installed.
- Ensure appropriate work safety regulations are met, e.g. protective clothing, eyewear and respiratory equipment.

HANDLING & STORAGE

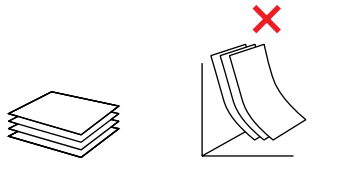
Carry boxes and panels **upright**



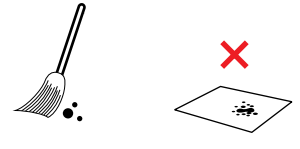
Store in a **cool dry** place, with **no direct sun**.
Avoid **65°C or greater**



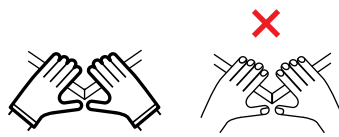
Store boxes and panels **flat**



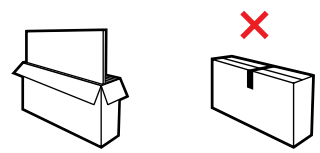
Keep all **surfaces clean** for storage and fabrication



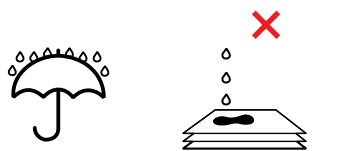
Wear **gloves** for handling **light colours**



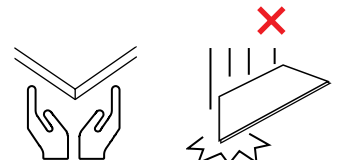
Upon delivery, **inspect** all goods for order **correctness** and **damage**



Keep **dry** and **avoid humidity**



Protect the **edges**

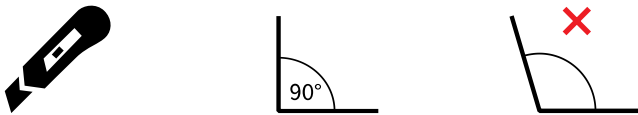


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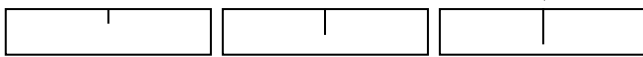
Cutting/trimming by machine

- EchoPanel® can be cut on a CNC machine or using a plunge cut circular saw or band saw with wave tooting blade and a metal guide.
- Do not use a serrated blade with side-set teeth.
- Trial cut on a scrap piece first, as saws will behave differently on sheets of different thickness and density.
- Feed against the rotation of the blade or tool using a slow, consistent feed rate to prevent overheating.
- A fast feed can cause frictional heat which can melt or fuse the heated contact points with a saw blade.
- Secure sheet whilst cutting to minimise vibration.

Cutting/trimming by hand



- Ensure blade is inserted into panel at 90° to the surface to ensure square edges and best results for butt joints.
- Ensure the blade is sharp and not too long or flexible to avoid skew cuts.
- Replace the blade often to maintain sharpness.



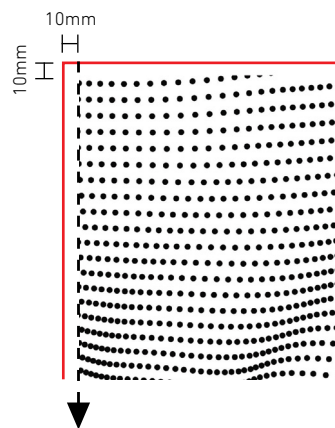
- For best results, use multiple cuts and light pressure.
- Keep flat and use a backing mat.
- Use a secure straight edge for straight cuts.

Trimming printed panels

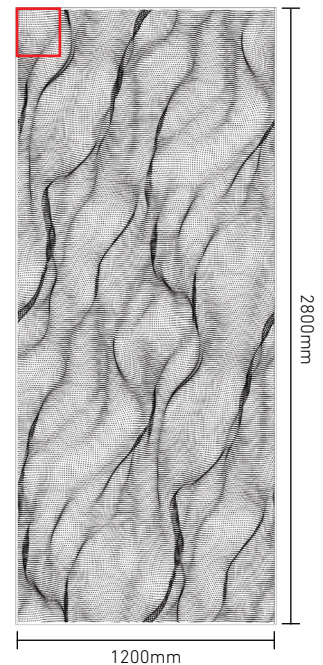
- Due to manufacturing tolerance, EchoPanel® prints are inset from the edge of the panel leaving an unprinted border around the edges that will need to be trimmed if butt joining side by side.
- The unprinted edge will vary from panel to panel by approximately 10mm pending the placement of the printed design.
- To assist with joining, a dashed line is printed on some designs to indicate where to trim to ensure a clean pattern match when joining panels side by side.

Example shown in Fluid design:

Approximately 10mm unprinted border



Dashed line for trimming of panel to pattern match edge to edge.



Fixing & adhesives

- EchoPanel® can be direct fixed with a commercial adhesive. It is the installer's responsibility to ensure the adhesive used is appropriate for the product and substrate it is being fixed to.
- Prepare the site with a clean drop sheet and place the panels face side down on the floor.
- Ensure the wall or ceiling surface is clean and free of dust or imperfections that could prevent adhesion. Industry standard of drywall Level 3 is recommended.
- Panels may easily flex. To avoid creasing, ensure they are well supported by a minimum of two people when positioning vertically to the substrate. Although there is

no set formula for fixing spans, it is reasonable to expect that fixing between 450mm to 600mm centres both vertically and horizontally would cause the panel to remain rigid in most circumstances.

- Adhesives should be used as per the manufacturer's instructions, and it is advised to perform a test piece prior to full installation.
- When using adhesives, position the panel to the substrate and apply even gentle pressure. Ensure to use minimum pressure at the edges to avoid adhesives showing.

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Forming

- Made from PET, EchoPanel® has the characteristics of most plastic type products when thermoforming.
- Heat can be applied to the panel whilst it is held in-form and then allowed to set.
- Folded corners are achieved seamlessly by carving out an appropriate mitre to the back of the panel, leaving about 5mm thickness of panel to bend around the required angle.
- The mitres can be routed out or cut with a knife.
- The angle of the mitre should correlate to the angle required to wrap the panel around – e.g. a 90° corner would require a 90° mitre.

Drilling

- When drilling, be sure to hold or clamp the sheet securely to prevent it from cracking or slipping and presenting a safety hazard to the operator.
- Twist drills used for plastics are suitable for drilling EchoPanel®.
- They should have two flutes, a point with an included angle of 60° to 90°, and a lip clearance of 12° to 18°.
- For larger holes, use a diamond-tip hole saw and present at a 45° angle to begin cutting and straightening up when penetrating the panel.
- Optimum bit speed, feed rate, and applied pressure will depend on hole size and sheet thickness. Drill speeds up to 1,750 rpm are best for smaller holes, while speeds as low as 350 rpm can work for larger holes.
- Wide, highly polished flutes are desirable since they expel the chips with low friction and thus tend to avoid overheating and consequent gumming.
- Drills with substantial clearance on the cutting edge of the flutes make smoother holes than those with less clearance.
- Drills should be backed out often to free chips.
- Drill holes that are minimum 15mm centre offsets from each corner, and slightly oversized to allow for thermal expansion and contraction. Ensure drilled holes have smooth edges.
- Use washers for better load distribution and to prevent pull through.
- Use metal inserts if frequent assembly/reassembly is required.

SAFETY DATA

Physical description/properties:

Specific gravity: 0.2

Vapour pressure: Not applicable

Flash point: Not applicable

Flammability limits: Not applicable

Ignition point: > 400° C

Solubility in water: Insoluble

Ingredients: Polyester Fibres (Polyethylene Terephthalate) - 100%, including up to 60% post-consumer recycled content.

Physical hazards: Polyester fibre product is chemically stable and resistant to attack by oils, solvents, weak acids and weak alkalis. The product will burn if exposed to flame.

Health hazards: Not normally a hazard to eyes or skin, if swallowed or inhaled, due to the physical form of this product. This product is non-irritant and does not present any health hazard during manufacture, normal handling or use.

First aid: Ingredients have no poison. In the event of ingestion of substantial ingredient quantity, give water and induce vomiting. Burns caused by molten ingredient require medical treatment.

Safe handling: No special storage or transport requirements are necessary. Keep dry. Adoption of safe working practices is recommended.

Disposal: At end-of-life, uncontaminated EchoPanel® will be taken back and recycled by Woven Image. Unless prohibited by state or local regulation, it can be disposed of in a municipal landfill or incinerated.

Fire/explosion: Precautionary measures should be taken against static discharge. Products resulting from combustion of polyester will comprise of carbon, hydrogen and oxygen, the exact composition depending on the conditions of combustion.