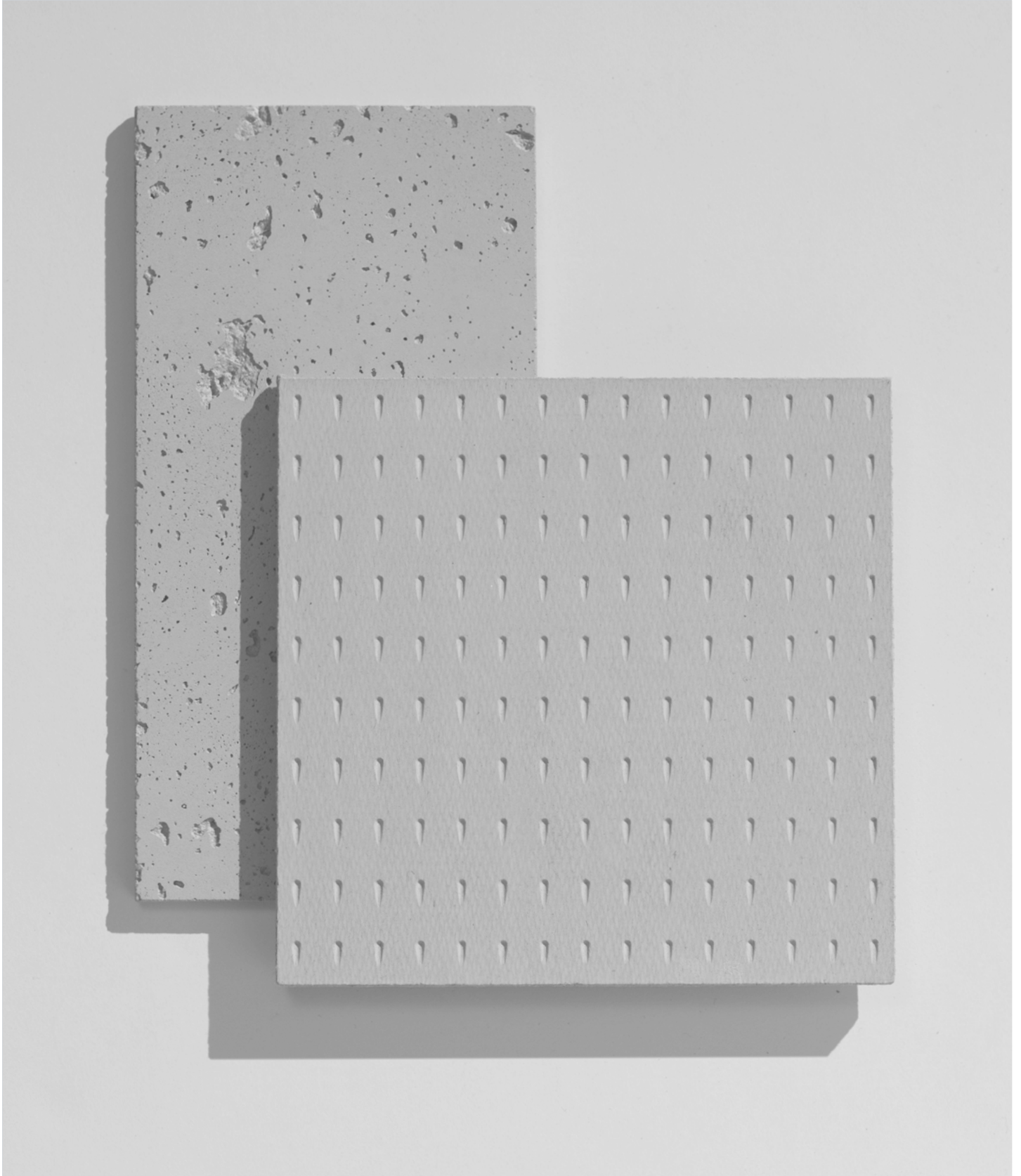


ALTED[®]

Paper Waste Panels

Installation Guidelines



READ THIS FIRST!

— Make sure you read the entire set of guidelines prior to handling, using, installing, or processing any product from Alted Materials.

— These instructions are intended to be a guide. It is the installer's obligation to recognize and compensate for field conditions. Best practices for building and craftsmanship should be followed by the installer. Alted Materials is not responsible for installation safety, direct or indirect damages, or contractor selection.

— Check materials thoroughly upon delivery and report any defects or quality rejects to Alted Materials immediately. Alted Materials accepts no responsibility for previously installed products that do not match the required quality standards.

PRODUCT DESCRIPTION

Paper Waste Panels is a collection of decorative wall panels suitable for interior use, versatile, easy to install, and easy to maintain, aiming to improve the sustainability profile of the built environment in which they are installed. The Paper Waste Panels are waste-based, plant-based, non-toxic, 100% recyclable in the same loop (with the implementation of a takeback program), and they have a low embodied carbon profile. This remarkable ecological character is accomplished mostly by the combination of its primary raw materials: the HONEXT® board and Iridea Bio as a protective coating. The HONEXT® board is made from cellulose waste from the paper industry, and the Iridea Bio coating is composed of up to 75% water and non-toxic and renewable raw materials derived from waste vegetable matter unfit for human consumption. Currently, the Paper Waste Panels collection comprises three patterns debossed on the surface, offering various shadow effects. The unique pressing technology enables pattern customization for large orders. Colours can also be customized by providing a RAL or NCS code.

FACT: 100 m² of Alted HO1 panels save 722kg of waste from ending up in landfills.

PRODUCT PROFILE



Waste-based
98% of recycled content



Plant-based
80% of the raw material



Recyclable
100% in the same loop



Non-toxic
A+ air quality, no added
VOCs



Reduced CO₂ E
Low embodied carbon
profile



Local production
Sourcing and manufacturing
within a 50km radius



Aesthetical variations
3 patterns, 5 colours and
customization options



Easy to install
Standard format and
installing systems



Easy to clean and to
maintain, using a moist
or dry cloth

CHARACTERISTICS

Main raw material	Paper industry waste and post-consumer cardboard – HONEXT®
Coating	Bio-resins extracted from plant-based waste – Iridea Bio
Area of use	Interior walls and ceilings
Installation	French cleat, z-clip, glue, screws
Size	600x600 mm ±1mm
Thickness	8mm ±0,5mm
Density	790 ± 10 kg/m ³
Weight	2,3 kg/panel
Fire Reaction	C-s1,d0. Available in B-s1,d0 from 2025
VOCs	A+ air quality (Grenelle Law)
Acoustic Absorption	0,15 α _w
Hardness	Shore A: 6 ± 1
Resilience (Rebound)	14,7 ± 2,3%
Flexural Strength	6,3 ± 0,9 MPa

GENERAL INSTRUCTIONS

PANEL'S NATURE

Cellulose is a natural material that can absorb or release moisture depending on the surrounding environment. The panels may warp or twist, especially if there are significant moisture or humidity differences between the installation environment and the panels' original storage conditions. Do not expose Paper Waste Panels to non-aerated environments. Never install Paper Waste Panels on walls exposed to excessive humidity. Paper Waste Panels should not be installed in high-moisture areas. We recommend their use only in living environments; if installed in kitchens, avoid areas exposed to liquids. They should not be installed in bathrooms.

FLEXIBILITY

The Paper Waste Panels have a certain level of flexibility while maintaining their shape and rigidity when properly installed and secured to the wall. If the wall surface has significant irregularities or unevenness and a completely flat wall is desired, it may be necessary to smooth out the wall or use battens to create a more even surface and facilitate a better fit for the panels. During installation, straighten the panels as much as possible by applying pressure and securing them firmly to the wall. It's important to note that while the panels may have some inherent flexibility, excessive force or bending can cause damage. It's always best to handle the panels with care and avoid applying excessive stress that could compromise their structural integrity.

UNPACKING AND HANDLING

Please handle Paper Waste Panels with care during unpacking and installation. The panels are delicate; don't drag them, use careful lifting and moving techniques to avoid chipping or damaging the edges. Be sure to inspect the materials upon delivery, note any damages, and notify Alted immediately. Do not install materials of unacceptable quality. Materials waiting to be installed should be stored in their original packaging in a clean, climate-controlled environment free of moisture. Let the products always stay stacked horizontally; never store them vertically or against a wall. Inappropriate storage and a lack of acclimatization could alter panel dimensions and weight.

WALL AND CEILING SURFACE CONDITIONS

Make sure that the surface where you will install the panels is clean and free from dust. If the surface is uneven, it must be leveled out before installation; this is particularly important when you install directly on the wall. Pay attention to painted surfaces where there is a risk of the paint coming off. Never install on a recently painted surface; the paint needs to dry properly. The responsibility for evaluating and recognizing potential issues with the paint or surface in general and compensating for different field conditions is with the installer.

CUTTING, REPAIRS, AND PAINTING

It is possible to cut Paper Waste Panels with a circular saw, tiger saw, or similar. Use discs with 96+ teeth and 5000 rpm for best results. The colors do not run through the material, so if you cut the panels, the edges will be exposed, unprotected from humidity, and showing the natural color of the raw material. We recommend planning carefully where the cut edges will be placed within the wall design. Both exposed edges and minor damages to the product during installation can be repainted with touch-up paint that Alted can provide. Panels with larger damages need to be replaced.

CLEANING & MAINTENANCE

Keep liquids away from the panels. In the event of a spill or minor stain on the panels, use a moist or dry cloth to wipe away the filth as soon as possible. Allow the product to dry in the open air until no moisture is apparent. Do not rub the panels. Do not use wet mops, wet scrubbers, or steam cleaners. We do not recommend using any liquids or very wet utensils to clean the products, nor do we recommend using solvents on the products. No wax, polish, oil soap, abrasive cleaners, steel wool, scouring powder, or significant amounts of water should be used. Do not scratch, punch, or rub the surface to ensure long-lasting durability.

END OF THE PRODUCT'S LIFE

We encourage the reuse of Paper Waste Panels that have been disassembled in connection with renovation or demolition. Refurbishment or repairs might be necessary, and Alted can provide the required coating products. Once the takeback program is in place, Paper Waste Panels can be 100% recycled in the same loop, not downcycled, to never become waste again. Please contact Alted to get more information about recycling options prior to dismantling. In most places, Paper Waste Panels can be recycled as paper in municipal recycling streams.

INSTALLATION SYSTEMS AND TOOLS

Please keep in mind that these are simply guidelines. Alted currently does not include installation systems with the panels. On the following pages, we recommend products that Alted has evaluated and can recommend. Alted is committed to promoting circularity and will always suggest the most suitable solution based on the architectural project's context. We encourage you to reach out to the Alted team to discuss which system best fits your needs.

READ BEFORE INSTALLING!

- Whenever possible, secure panels along all sides. If using glue or mechanical fixings, ensure fixing points every 100mm around the sides, leaving a 10mm space from the edge. Corners should always be fixed. If not fixing all edges, secure the horizontal edges.
- Leave a minimum gap of 1 mm between panels to accommodate dimensional movements.
- Always leave a gap between the installed panels and the floor or use skirting solutions to prevent damage during floor cleaning.
- Use only the systems Alted or a licensed installation company recommends. In any case, the installer is responsible of identifying field conditions and making the required adjustments for optimal results.

GLUE FIXING SYSTEM

EVALUATION

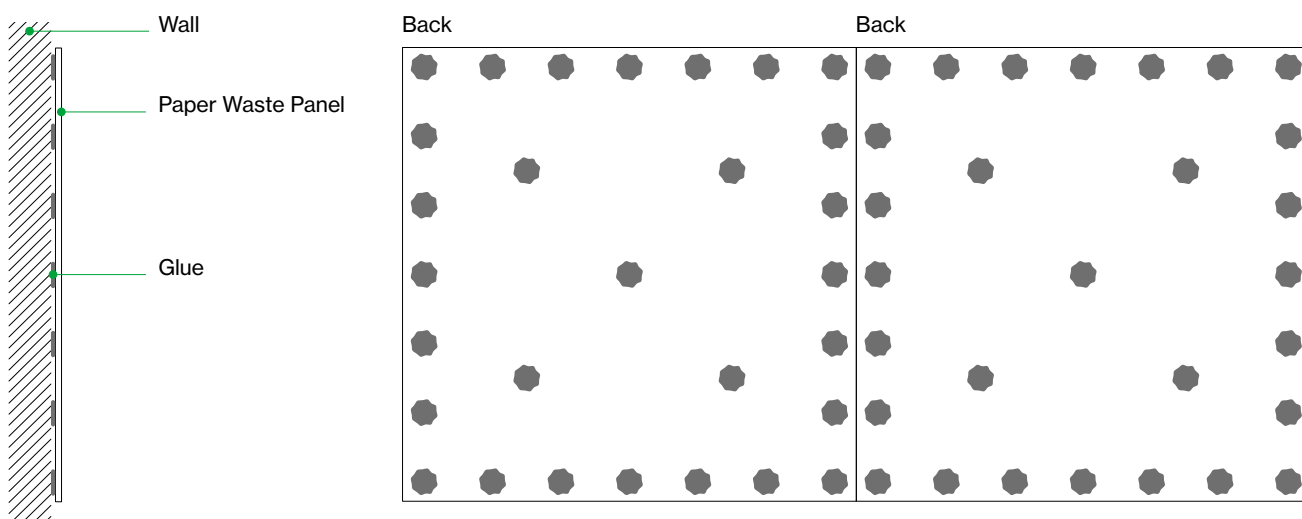
This is the most permanent method, as well as the quickest to install and most cost-effective, but it does not allow for the reuse of the panels after disassembly because they would be damaged when taken from the wall or surface. We recommend this option only if recycling is the next step in the product's life cycle.

RECOMMENDATION

Because of its low VOC environmental conditions, Alted recommends Pattex No More Nails glue. Other high-tack glues might be used as well, such as Casco Superfix or Loctite Powergrab.

- 1 — Before you start, read and follow the General Instructions.
- 2 — Mount a horizontal beam below the bottom row as a foundation or mark the bottom line.
- 3 — Put glue on the first piece and push it firmly towards the surface. You will be allowed to move the piece slightly on the surface to secure an exact position.
- 4 — Install upwards and remove the bottom line once finished.

GRAPHIC REPRESENTATION



FRENCH CLEAT OR Z-CLIP SYSTEM

EVALUATION

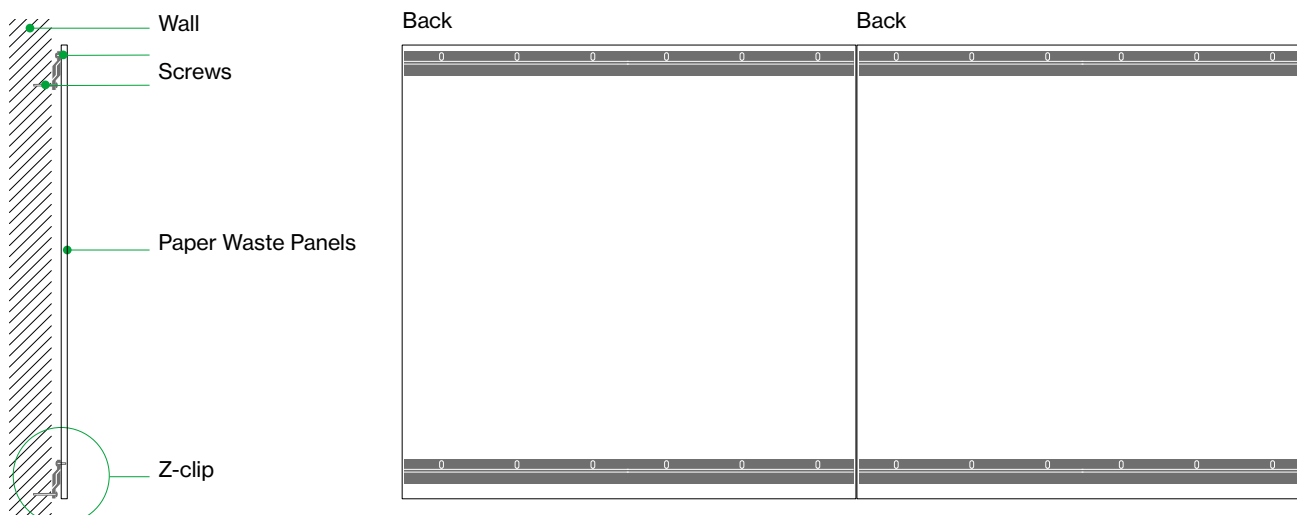
Alted recommends the Z-clip system as the preferred installation option for Paper Waste Panels. This system offers mounting and dismantling without causing significant damage to either the walls or the panels. The rigid clip strips ensure precise alignment of the panels. When the panels need to be temporarily removed or replaced, they can be easily unhung from the Z-clips. When detached and reattached to the clip strip, a new screw hole will be required to ensure a secure attachment.

RECOMMENDATION

The Z-Clip system is an aluminum version of the “French cleat” system, which typically uses wooden battens to create a hanging grid. Any clipping system based on this principle is a very good option for installing Paper Waste Panels.

- 1 — Before you start, read and follow the General Instructions.
- 2 — Mark the desired positions for the Z-clips on both the wall and the back of the panels. Follow the manufacturer’s recommendations for proper spacing and placement.
- 3 — Attach the Z-clips to the marked positions on the wall and panels using appropriate screws.
- 4 — Slide the panels downward onto the Z-clips, ensuring a snug fit.

GRAPHIC REPRESENTATION



BASE AND CORNER FINISHING SOLUTIONS

MITER CUT

To finish corners with the Paper Waste Panels, the edges can be cut at a 45° angle using a circular saw or a 3D router. However, the cut edges of the panels will not be clean, so they will need to be sanded. White glue can be used to ensure that the joints stay securely bonded and do not separate. If the color of the panel's inner material becomes visible after cutting, it can be touched up with the touch-up paint that Alted provides. This method of joining the panels is labor-intensive, which is why we recommend the following option: corner trims.

CORNER TRIMS

Alted recommends using standard wooden corner trims to finish the edges clad with Paper Waste Panels. These trims can be painted with the same coating as the panels, utilizing the touch-up paint that Alted provides. Additionally, you have the option to choose the desired shape of the corner trims, whether square, flat, or rounded, allowing for a customized and polished look that complements your design.

SKIRTING BOARDS

When installing the panels, it's crucial to always leave a gap between the panels and the floor. This gap allows for natural expansion and contraction due to temperature and humidity changes, helping to prevent warping or damage. Additionally, it protects the panels from moisture during floor cleaning or spills. You can consider using skirting solutions. Skirting boards not only cover the gap but also provide a finished look while acting as a barrier against scuffs and scratches.

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