

Valid for all product groups, except for Oceano, Acrylic faced and Gravitas wallcovering design sheets and **exclusively** recommended for indoor applications

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Ground preparation for bonding ELEMENTS sheets

- The ground must be dry and smooth, and free from loose material, dust, dirt, grease, wax and silicone. ELEMENTS patterned sheets should never be mounted onto an uneven surface, as this results in a loss of visual quality.
- In the case of convex and concave surfaces, the sheet edges must be fixed mechanically (except For Pixels sheets).

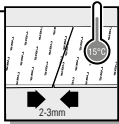
Non-absorbent surfaces

- In order to achieve maximum adhesion, always clean non-absorbent surfaces with alcohol (ethanol, isopropyl alcohol).
- Self-adhesive (SA) sheets are ideally suited to non-absorbent surfaces such as coated MDF/chipboard, glass, metal, plastic, etc. However, they are unsuitable for use on ceilings. Alternative processing options are available on request.

Absorbent surfaces

- A solvent-free adhesive, which is suitable for both the underlying surface and the polystyrene material (base material), must be employed on absorbent grounds, e.g. uncoated chipboard, MDF, plasterboard, or smoothed brickwork.

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General bonding information

- Patterned sheets delivered in rolled form must be kept flat for a minimum of 24 hours. Weighing down improves evenness.
- Ideal processing temperatures range from + 50 °F to + 86 °F. The design sheets must be acclimatised, i.e. be brought to room temperature prior to processing (avoidance of condensation on the gluing surface and a reduction in sheet expansion due to reduced temperature differences).
- A temperature increase of 18 °F will cause our products to expand by approx. 0.7 mm over a length of 1 m.
- **As a rule, an approx. 2-3 mm expansion joint is to be left along the sheet edges!**
- In the case of high ambient temperatures, or major temperature fluctuations, the expansion gap should be increased, or a smaller sheet format selected.
- Remove the paper backing from the reverse side of self-adhesive patterned sheets (SA) step-by-step. Do not touch the adhesive surface and press the sheet onto the ground as firmly as possible. Avoid the formation of bubbles (air inclusions) and use a medium-hard, rubber roller with a width of approx. 7-12 "
- Full adhesion will be reached at room temperature after 24 hours.
- Whenever possible, ELEMENTS products should be processed within 12 months upon receipt of goods (except For PVA pre-treated products).
- They are not recommended for use near open fires or sources of intense heat.
- It is imperative, that you carry out adhesion tests and self-tests before bonding the panels! Samples are available for testing

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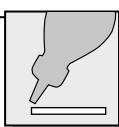
Processing of non-adhesive Design panels (NA) with putty adhesive

- The putty adhesive (solvent-free assembly adhesive without plasticizers) Glutolin UK and Bostik Ardaflex® Multi are perfect if you want to glue a non-adhesive design panel (NA) directly to an absorbent substrate. This is simply applied to the substrate with a spatula and the design panels are glued, taking into account an expansion joint. Select the tooth spatula size depending on the substrate and structure depth: A2 or B3.
- Area of application: Putty adhesive Glutolin UK and Bostik Ardaflex® Multi (tooth spatula B3) are ideal For bonding products to absorbent, even surfaces such as wood, MDF, plywood, chipboard, plasterboard or smoothed masonry. The processing guidelines for the respective adhesive must be observed.

Processing of non-adhesive Design panels (NA) with cartridge adhesive

- Strand bonding: On the reverse side of the sheet: vertical positioning of a bead at a distance of 10 mm from the edge of the sheet or the profile leg, then position a mirrored adhesive tape at a distance of 10 mm. It is recommended that the protective strip on the mirrored tape be removed prior to the further processing phases. Apply vertical beads of adhesive to the reverse side of the sheet at intervals of approx. 10 mm to the mirrored adhesive tape. (Depending on the underlying surface, the beads should have a height of at least 4 mm.) Apply the other beads at a distance of 60 mm. Bring the sheet into position without any drying time and then press it down onto the prepared surface by means of vertical strokes with a soft wallpaper roller. The gluing can also be done without mirror adhesive tape! Advantage: The sheet can be positioned much easier. Disadvantage: The sheet has to be temporarily attached until the adhesive beads have cured in order to prevent the plate from slipping unintentionally.

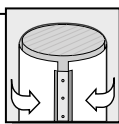
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PVA-Bonding

- Non-adhesive patterned sheets (NA) from our DECO-LINE, LEATHER-LINE, FABRIC-LINE and STRUCTURE LINE program (with a few exceptions) can be bonded with standard commercial PVA adhesives.
- This type of processing, allows the use of standard plastic, aluminium or wood edging. The PVA adhesive prevents the usual expansion of our design sheets due to the effect of warmth!
- In order to be suitable for PVA bonding, depending upon the material thickness on the reverse side, design sheets either have to be pre-treated by means of an additional production process, or roughened by using a vibration sander (80-grain sandpaper).
- When pressing structured design sheets (STRUCTURE-LINE, FABRIC-LINE and LEATHER-LINE), a medium-hard, sponge rubber mat with a thickness of approx. 5 mm should be placed between the pressing plate and the patterned side of the sheet. This provides uniform pressure distribution and prevents undesirable damage to the design. In the case of smooth patterned sheets, it is advisable to carry out pressing without the sponge rubber mat, as this can give the surface an uneven appearance. In order to retain a smooth surface more easily, enquire about our sheets with a 2 mm thickness.
- If owing to transport or storage conditions the design sheet no longer has a crease-free protective film, this must be removed prior to the pressing process. The pressure applied should amount to 2 kg/cm² (0.2 N/mm²), the temperature to approx. 45 °C and the pressing time to around 15 minutes. The bonding of the PS-balancing material and the design sheet takes place in a single working process.
- During pressing onto an uncoated particleboard with a 16 mm thickness, we have achieved the best results using a 0,8 mm-polystyrene balancing sheet.
- Following pressing, allow the sheets to cool in a stack over night (approx. 16 hours). Cover the stack with a roughly 19 mm-plate, in order that the uppermost sheet also remains flat.
- Products pre-treated with PVA should be processed within the stated period

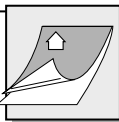
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Column facing with non adhesive (NA) products

- When covering columns, the bending radius OF the respective ELEMENTS product must be accounted For (please consult a salesperson For technical data
- In order to facilitate sheet mounting, we recommend the use of double-sided adhesive tape in order to fix both ends.
- An expansion joint of 2-3 mm is also to be left when covering columns.
- It is essential that a mechanical fastening such as a floor transition profile is used as edging.
- During column applications involving PIXEL products on absorbent surfaces, we also recommend the use of the recommended filler adhesives.

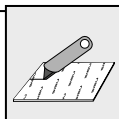
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Surface protection

- A protective film protects our surfaces against damages. This protective film should be removed only after the application of our design sheets.
- Following the removal of the protective film, no adhesive tape, e.g. Scotch, Sellotape should be allowed to stick to the unprotected, decorative surface.

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Cutting

- ELEMENTS Deco-Line sheets with less than 2 mm thickness can be easily cut with a wallpaper knife. Simply notch the surface and break about the edge. For all other product lines and for DECO-LINE sheets up to 3 mm thickness the cutting pressure has to be increased. After cutting and breaking our self adhesive (SA) design sheets as well as ECO-LINE and FABRIC-LINE designs (NA + SA) the Foil on the back side has to be cut separately. Always use well sharp knives. For mechanical cutting, we recommend the use of paper or veneer cutting machines.

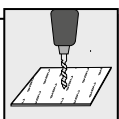
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Punching

- Band steel cutting is recommended for design sheets in thickness from 1 up to 1.5 mm.

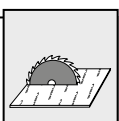
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Drilling

- All ELEMENTS sheets can be drilled from the decor side.

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Sawing

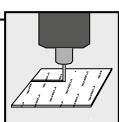
ELEMENTS guideline values:

Material thicknesses of up to 1 mm: HW 280x3.2 / 2.2x30 Z60 / 12.46-18.08 WZ

- Thicker than 1 mm: HW 250x3.2 / 2.2x30 Z40 / 19.63 WZ/FA - HW 250x3.2 / 2.2x30 Z40 / 19.63 FZ/TR (speed 6000 rpm, progressive feed of up to 25 m/min). For LEATHER-LINE and FABRIC-LINE: HW 255x2.8 / 2.0x30 Z80 / 10.01 FZ WZ (speed 6000 rpm, progressive feed of up to 10 m/min).
- The best result with LEATHER-LINE and FABRIC-LINE is achieved with MDF underlay (4 mm) above and below, slow progressive feed and high speed.

*HW (hard metal material), WZ/FA (alternating teeth/bevelled edge), FZ (flat teeth), TR (trapezoidal teeth)

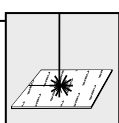
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Milling

- For material with a thickness of up to 2 mm: employ a cutter with a 3 mm-diameter, a rotation speed of 12,000 to 24,000 rpm and a progressive feed of up to 12 m/min.
- The patterned side on top: milling cutter with a left-hand twist, cutting right.
- The patterned side below: milling cutter with a right-hand twist, cutting right. For material with a thickness of more than 2 mm, reduce the progressive feed and use a milling cutter with a larger diameter (6 mm).

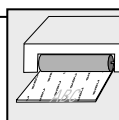
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Laser cutting

- ELEMENTS sheets can be processed with standard lasers. The cutting speed is in line with the wattage of the laser.
- To ascertain if the chosen product is suitable, please consult a salesperson

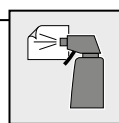
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Printing

- Whether or not an ELEMENTS product is recommended for printing can be ascertained from your salesperson.
- Owing to the many differing printing and colour systems, customers must carry out a printing test. The result will depend on the respective motif. We will be pleased to provide original samples for testing.

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Cleaning/Care

- DECO-LINE, STRUCTURE-LINE, ECO-LINE, Acrylic faced for thin dirt use a soft cleaning cloth (this must be free of dust and dirt).
- For thicker dirt, employ a standard, plastic or window cleaner (do not spray the cleaning agent onto the material surface, but sparingly onto the cleaning cloth).
- Do not use abrasive cleaning agents, agents containing solvents, or pure alcohol!
- LEATHER-LINE: Clean leather surfaces using standard liquid soap and then remove the soap with a damp cloth.
- FABRIC-LINE: Stains caused by oil, greases and ink must be removed immediately. Vacuum the surface in case of low pollution; in case of heavy pollution, dab the stain with an absorbent cloth, then wipe it off with mild soapy water.

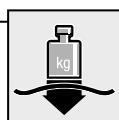
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Disposal

- Because not everyone has its own plastic disposal container, we pay special attention in development of new products to use only high-quality materials: materials, which may be disposed safely with the domestic waste.
- By request we are pleased to provide LGA certificates for all sheets.

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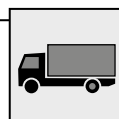


Storage instructions

ELEMENTS sheets must always be kept in indoor stock, no storage outside! Following instructions are to be considered:

- Design sheets to be stored flat, rolled packed design sheets should be unpacked and laid out flat and - if necessary - subjected to additional weight to improve flatness (Use carton underlay and weigh down the entire sheet in order to prevent damage.).
- Store the uppermost plate in the pile with decor side down.
- Protect ELEMENTS products from UV rays.
- Do not expose ELEMENTS products to moisture or humidity.
- Protect material from dirt, dust and mechanical damages.
- A permanent storage of more than 3 months in temperature less than 32 °F or more than + 86 °F may impact the quality of our design sheets and should be avoided.

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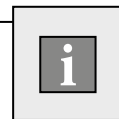


Transport instructions

In general, during the transport of ELEMENTS products care must be taken to safeguard them against dirt, UV radiation, moisture and mechanical damage.

- Use stable, flat pallets that are longer than the design sheets and covered with cardboard bedding.
- Place the uppermost design sheet on the pallet with the patterned side face down. This uppermost design sheet should be protected additionally by carton and a board (e.g., chipboard, HDF...). Slippage of the ELEMENTS sheets must also be prevented.
- The edges and sides must also be safeguarded (edge protection, PE film,...).
- Temperatures may not fall below -31 °F, or exceed +122 °F.
- Structured sheets are to be transported on pallets with the patterning always running in the same direction.
- Basically, the transport of design sheets in a rolled condition is possible. Information regarding the related suitability of the chosen product can be found by consulting your salesperson

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