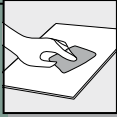
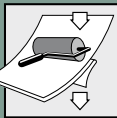
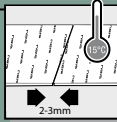


1 Ground preparation for bonding Elements sheets



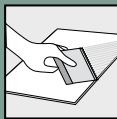
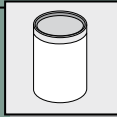
- The ground should be dry and flat, free from loose parts, dust, dirt, grease, wax and silicone. To achieve a maximum adhesion, non-absorbent surfaces should be cleaned with alcohol (ethanol, isopropyl alcohol).
- Self-adhesive (SA) sheets are suitable for both absorbent and non-absorbent surfaces such as plasterboard, uncoated chipboard, MDF or smoothed brickwork, whereby non-adhesive grounds are recommended.
- When applying **Elements** to highly absorbent surfaces such as brickwork, plasterboard and uncoated chipboard, we recommend the use of additional adhesive.
- In the case of non-adhesive sheets, we also recommend using adhesive for porous or highly absorbent surfaces such as brickwork, plasterboard and uncoated chipboard.
- In the case of non-absorbent grounds surface tension should be at least 38 days (industrial info!). For application on convex or concave grounds all sheet edges must be fixed mechanically.

2 General bonding information



- Ideal processing temperature ranges from + 10 °C up to + 30 °C. The design sheets should be acclimatized, i.e. they should be brought to room temperature prior to processing (avoid condensation of the gluing surface).
- A temperature increase of 10 °C will cause our products to expand by approx. 0.7 mm over a length of 1 meter.
- As a rule, an approx. 2-3 mm expansion joint is to be left along the sheet edge!
- In case of high surroundings temperature or major temperature-fluctuations the expansion gap should be increased or the sheet format should be chosen smaller.
- Avoid blistering (air inclusions); use a medium-hard hand rubber roller with a width of approx. 170 mm.
- Remove the backing cover step-by-step from self-adhesive design sheet (SA), do not touch gluing surface and press the sheet onto the ground as firmly as possible. The final adhesion power will be reached at room temperature after 24 hours.
- Patterned sheets delivered in rolled form should be kept flat for a minimum of 24 hours. Weighing down improves evenness.
- Elements sheets should be processed within 18 months (PUR/PVA pre-treated products are excluded).

3 Processing with Solvent-free dispersion adhesive



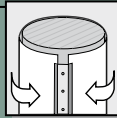
- Application. Solvent free dispersion adhesive is ideally suited to the bonding of Elements products onto absorbent, even surfaces such as wood, plywood, chipboard, plasterboard or smooth brickwork.
- ATTENTION: Not suited for non-absorbent grounds such as tiles, plastics, metals, glass, etc.
- Processing: Apply exclusively on the entire cleaned ground by means of fine spatula (spatula tooting is given for every product). At surrounding temperature between 20 °C and 35 °C the adhesive should then be left to air for 20 - 50 minutes.
- The higher the surroundings temperature is the shorter is the airing time.
- Finger test: After application with the spatula the maximum airing time is reached as soon as the glue no longer sticks to the fingers!
- Storage: In the original airtight containers the adhesive can be stored up to 12 months from delivery date. Store always above freezing point.

4 PVA/PUR-Pressing



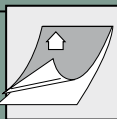
- Non adhesive design sheets are compressible with commercial PVA adhesives. The base must be absorbent (MDF, chipboard, etc.)
- As a result of this type of processing, standard edges of plastic, aluminium or wood can be used! The PVA adhesive prevents the usual expansion of our design sheets due to the effect of increased temperature!
- In order to be suited to PUR/ PVA bonding, Elements sheets have to be pre-treated according to material thickness on the reverse side either by an additional production process or customer-sided grinding (using sandpaper - granulation 80).
- When pressing structured design sheets, a medium-hard sponge rubber mat with a thickness of approx. 5 mm should be used between the pressing sheet and the patterned side of the design sheet. This provides uniform pressure distribution and prevents undesirable crushing spots caused inadvertently by particles of dirt between the pressing sheet and the design sheet. If you want to have a perfect mirror result, ask us for design sheets in 2 mm thickness.
- Should by reason of transport or stock conditions the design sheet not have a crease-free protective film, the film should be removed prior to 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 10 minutes. The bonding of the balancing material and the design sheet should be done in a single working process. Standard HPL sheets are suited as a balancing material.
- During pressing onto an untreated particle-board with a thickness of 16 mm the best results were achieved with a 1 mm polystyrene sheet for balancing.
- Following pressing allow the sheets to cool in a stack over night (about 16 hours). Cover the stack with a 19 mm plate so that the uppermost sheet also remains flat.
- Products pre-treated with PUR/PVA should be processed within the stated period (between 3 and 6 months).

5 Column facing with non adhesive (NA) products



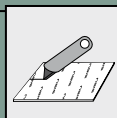
- When covering columns, the bending radius of the respective Elements product must be accounted for.
- We recommend double-sided, adhesive tape in order to fix both ends as a help during application.
- An expansion joint of 2-3 mm is also to be left when covering columns.
- It is essential that a mechanical fastening such as a floor transition profile is used as edging.
- During column applications on absorbent surfaces we recommend the additional use of adhesive.

6 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.

7 Cutting



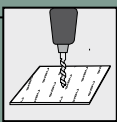
- Elements sheets with less than 2 mm thickness can be easily cut with a wallpaper knife. Simply notch the surface and break about the edge. For all other product lines up to 3 mm thickness, the cutting pressure has to be increased. After cutting and breaking our self adhesive (SA) design sheets as well as 3D and NonAdhesive, 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.

8 Punching



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

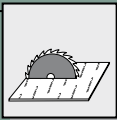
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Drilling

- All Elements design sheets can be drilled from the decor side.

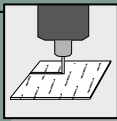
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Sawing

- For material up to 1 mm thickness: HW 280x3.2 / 2.2x30 Z60 / 12.46-18,08 WZ
- For more than 1 mm thickness: HW 250x3.2 / 2.2x30 Z40 / 19.63 WZ, HW 250x3.2 / 2.2x30 Z40 / 19.63 FZ/TZ. Rotation speed 6000 rpm – progressive feed up to 25 m/min For LUXE-LINE: HW 255x2.8 / 2.0x30 Z80 / 10.01 FZ WZ. Rotation speed 6000 rpm – progressive feed up to 10 m/min
- With LUXE-LINE the best result is achieved with MDF increment (4 mm) below and on top, low progressive feed and high rotation.

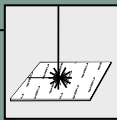
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Milling

- For material up to 2 mm thickness: cutter with 3 mm diameter, rotation speed from 12000 up to 24000 rpm, progressive feed up to 20 m/min. Decor side on top: single-edged cutter - left turn,
- Decor side below: double-edged cutter - right turn. For material with more than 2 mm thickness reduce progressive feed and use a cutter with bigger diameter (6 mm).

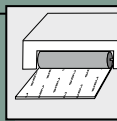
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Laser cutting

- All Elements design sheets can be processed with standard lasers. The cutting speed conforms to the watt power of the laser.

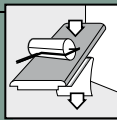
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Printing

- Use screen and digital printing on smooth surfaces. Digital printing is possible on structured surfaces. We offer original samples for tests. Info sheets on demand.

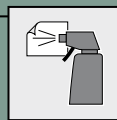
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Profile handling

- The profiles must be acclimatised, which means that they have to be brought up to room temperature prior to use.
- Cutting must always take place on the upper surface. The profiles must be sawn for a mitred cut and precise edge angle quality.
- The positioning of the profiles must be selected in such a way that the material expansion of the covered sheet can take place behind the profile nose (2-3mm).
- The exact positioning of the sections on the ground is necessary, as previously glued profiles cannot be stuck down again.

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Cleaning/Care

- In case of light dirt by means of soft cleaning cloth (it should be free of dust and free of dirt).
 - In case of thick dirt by means of standard plastic or window cleaner (**do not spray** onto the material, but sparingly onto the cleaning cloth).
 - Do not use abrasive cleaners, solvent cleaners or pure alcohol!
 - LUXE-LINE: Clean leather surfaces by means of standard liquid soap and then remove the soap with a humid cloth.
 - Clean imitation fur surfaces with a vacuum cleaner, in case of strong dirt clean with a humid cloth.
 - We recommend that printed surfaces are only cleaned with slightly soapy water. No abrasive, glass cleaning or similar agents may be used. Rinse with clean water.
- Cleaning/care may vary in accordance with the printing color manufacturer.



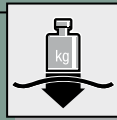
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Disposal

- Maintaining a healthy environment is a priority for us! We check all raw materials used for their environmental compatibility.
- Because not everyone has its a plastic disposal container, we pay special attention in development of new products to use only high-quality materials, which may be disposed safely. By request we are pleased to provide LGA certificates for all Elements design sheets.

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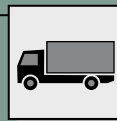


Storage instructions

Elements design sheets must always be kept indoor! The following instructions are to be considered:

- Design sheets are 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 0 °C or more than + 30 °C may impact the quality of our design sheets and should be avoided.

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Transport instructions

In general, for the transport of Elements products pay attention to protect them from dirt, UV radiation, moisture and mechanical damages.

- Use stable, flat pallets with carton bedding, the pallet should be longer than the design sheets.
- Place the uppermost design sheet on the pallet with the decoration side face down. This uppermost design sheet should be protected in addition by a carton and a board (e.g., chipboard, HDF...). The Elements sheets should be protected against slippage.
- The edges and sides must also be safeguarded (edge protection, PE film, ...)
- Temperatures may not fall below -35 °C, or exceed +50 °C.
- Structured sheets to be transported on pallets with the patterns running in same direction.
- The transport of Elements design sheets in rolled condition is possible.

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Further information about the processing of our products can be found by contacting our sales staff @ 201.968.0101.