Engineering progress
Enhancing lives

RAUKANTEX Zero-joint Edge

No glue.
No joint.
No problem.

REHAU

Zero-joint Edgeband™

REHAU Zero-joint Edgeband has a pre-applied, co-extruded polymer functional layer replacing the traditional glue, allowing for a much superior and seamless joint between the edgeband and the board.

The Advantages of Zero-joint Edgebanding

Visual Appeal

- Achieve monolithic panel look
- Enhanced leading industry trends (high gloss and textured panels) with no framing effect
- No glue joint that collects dirt, chips away or becomes yellow over time

Improved Quality

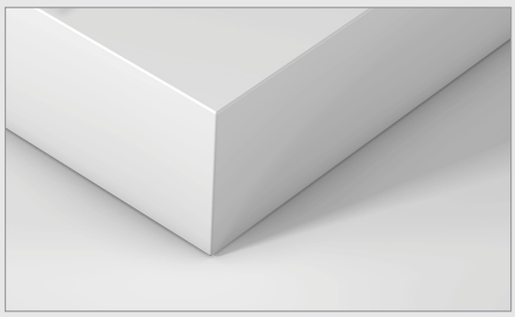
- Creates a bond equal to or greater than PUR (no delamination)
- Extremely heat and moisture resistant bond
- ABS and PMMA are the most common materials used

Unparalleled Performance

- Long-term benefits to be enjoyed
- Better moisture resistance, heat resistance and performance over time
- Seamless joint and a higher quality seal

Value for Money

- Higher quality edging allows you to promote a higher-end finished product at a premium
- No hotmelt or down-line cleaning of excess adhesive from finished panels
- Increased edgeband costs are offset by the upscale finished product in the market



Laser Bonding

Traditional Bonding

Zero-joint edge and a hot-air or laser machine allow you to achieve a seamless joint and superior finish. When a seamless joint is done properly, it's very difficult to see the seam between the edgeband and the board. In case of glue , the glue line is visible.

Technical Information

RAUKANTEX pro

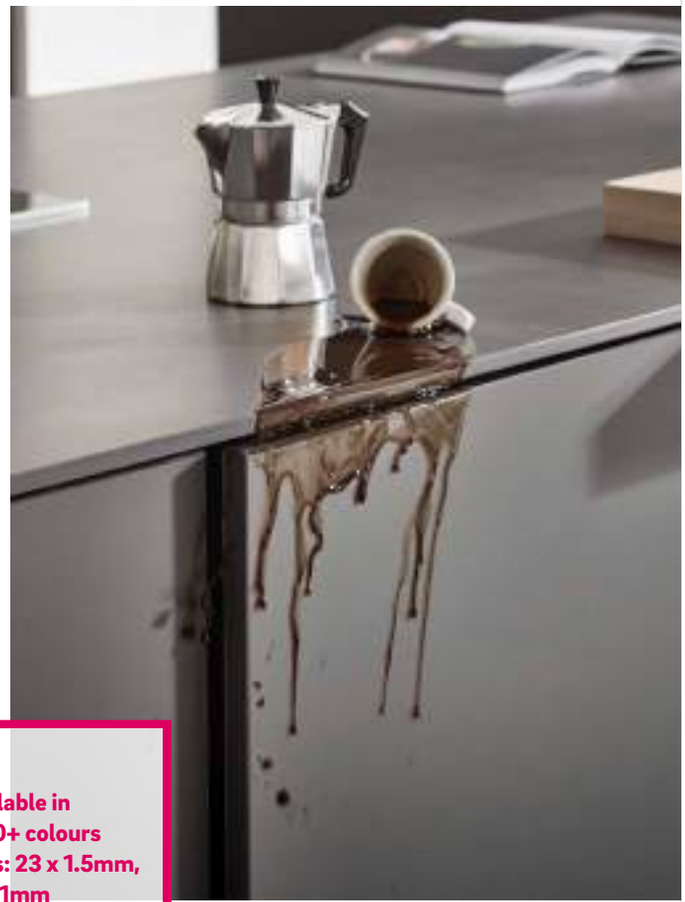
Using RAUKANTEX pro, you can achieve the perfect, permanent invisible joint thanks to the 100% polymer functional layer – no adhesives and no compromises

RAUKANTEX pure

RAUKANTEX pure, REHAU's tried-and-tested edgeband with primer, is available in all dimensions and decorative designs.

1. Suitability

RAUKANTEX zero-joint edgebands are designed for processing on edgebanding machines that work with Co_2 and diode laser technology, hot-air, plasma or NIR process. These edgebands have an added functional layer. Due to the many parameters, which can impact upon edgeband application (board type, machine set-up etc.), REHAU would recommend conducting processing trials prior to series production. Please refer to the relevant technical information of the respective edgeband material for processing details.



Available in 1000+ colours
Sizes: 23 x 1.5mm, 23 x 1mm

Achieve invisible joint using three technologies:

Laser technology
During laser processing, a laser activates the edgeband's functional layer.

Near infra-red technology
NIR technology allows thermal energy to be transferred quickly and accurately.

Hot air technology
Hot compressed air can be used to melt the functional layer during the hot-air process.

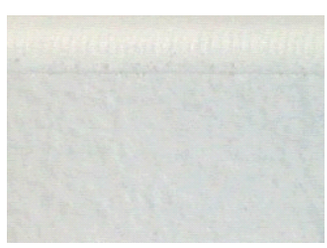
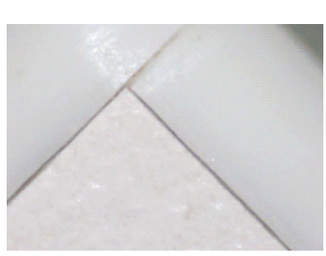
2. Properties and differentiation

Designation	RAUKANTEX pro	RAUKANTEX pure
Invisible joint	★★★ Zero-joint technology with colour matched polymer functional layer	★ Conventional edgeband with primer
Zero-joint quality	★★★	★ EVA / PUR
Edgeband adhesion	★★★	★ EVA ★★★ PUR
UV stability	★★★	★ EVA / PUR
Heat resistance according to AMK edging	★★★	★ EVA ★★★ PUR
Processing procedure	Zero-joint application method	Adhesive applied by machine
Availability	Against order	Ex stock
Materials	PMMA, ABS	PVC, ABS
Minimum buying quantity	Starting at 2000m	Starting at 1 box

★★★ Excellent ★★ Good ★ Limited

Zero-joint Edgebanding vs Normal Edgebanding

Water Vapor Resistant

	EVA-Bonding	PUR-Bonding	Laser Bonding
- Joint Quality			
- Exposure to steam (3x30min)			
- Corner Connection			
- Exposure to steam (3x30min)			

Disclaimer: The performance of the Edgebands depends on the machine performance, Quality etc.
For more assistance connect the REHAU Technical Team.

3. General processing instructions

The edgebands to be processed must be acclimatised at normal room temperature (> 18°C). It is recommended to open the boxes. In practice for processing, suitable extraction must be ensured. Subject to the technical instructions on air quality, extracted air can be discharged into the surroundings – local conditions and regulations must be checked in each case. In the case of clean air recirculation, dust particles and gaseous components must be filtered appropriately. The specifications from the machine and filter manufacturer must be observed here. For further instructions and guidelines on optimal processing of RAUKANTEX edgebands, separate processing instructions specific to the material are available from REHAU.

4. Storage

If stored properly, RAUKANTEX edgebands can be stored for min. 12 months. For edgebands older than 12 months, however, a processing trial should always be carried out prior to series processing.

Recommended storage conditions:

- Room temperature (approx. 18°C to 25°C)
- Dry
- Clean
- No vapours containing solvents
- Protected from light

5. Processing parameters for laser process

The specific energy recommended by REHAU should be used for the processing of RAUKANTEX zero-joint edgebands (pro) with diode lasers. The so-called Espec. [J/cm²] is a value that is determined metrologically and which specifies the required energy per area depending on colour. The Espec. is printed on every roll in the REHAU inside label and available in list form for the specific customer if required for production planning. These specifications apply to straight-line edgebanders. For CNC processing centres (shaped parts), the values should be adjusted to suit the individual machine (in the case of HOMAG and IMA processing centres, since mid 2015, the same Espec. has been used as for straight-line edgebanders). When using a Co_2 laser, the specifications of the required laser power [W] depending on edge width and feed rate must be requested from REHAU. Processing of RAUKANTEX pro in PVC material using laser technology is not authorised.

6. Processing parameters for hot-air

The specifications for the machine settings are recommendations for processing on straight-line edgebanders when edging 19mm carrier boards and with the specified feed rates. The main pressure roller should be at 2.5 - 3bars (approx. 20-25 kg). In case of deviation, the machine parameters must be adjusted in consultation with the respective machine manufacturer or REHAU.

HOMAG parameters	**At 10 (up to 10m/min.)** pro	**At 20 (up to 20m/min.)** pro
temperature nozzle	490°C	650°C
pressure nozzle	1,6 bar	4 bar

BIESSE AirForce parameters	**P1/2 (Akron) up to 18m/min.** pro	**P3/4 (Stream) up to 30m/.in.** pro
temperature nozzle	480°C	580°C
air volume	1100 nl/min.	1100 nl/min.

HEBROCK airRronic parameters	**V_f = 10m/min.** pro
temperature aggregat	450°C
air volume	480 nl/min.

FELDER advantEdge parameters	**V_f = 10m/min.** pro
temperature blower	500°C
temperature nozzle	310°C
air volume	500 nl/min.

For all other hot-air sources on the market, the setting parameters must be requested from the respective machine manufacturer. RAUKANTEX pro can also be processed in PVC material using the hot-air process.

7. Processing parameters for NIR process

The NIR technology works in a wavelength range close to the diode laser and is based on the activation of absorbers. An edgeband calculator provided by the machine manufacturer is available for the individual setting of processing parameters, with the help of which it is possible to convert the specific energy values Espec. [J/cm²] of RAUKANTEX edgebands (pro) recommended by REHAU into device-specific performance values [kW].

8. Frequently asked questions

Laser technology:

Problem	Problem Diagnosis
1. Open joints on long edge	- Incorrect laser coverage setting - Incorrect pressure zone setting - Angularity of form cutting
2. Open joint in corner	- Edge and board feed not synchronised - Edge overhang too long/short - Laser radiation start/end not compatible
3. Too little adhesion/peel strength	- Functional layer thickness outside tolerance - Pressure zone setting incorrect (lift, pressure) - Energy specification not compatible with the edge
4. Functional layer burns/heavy smoke formation	- Energy specification not compatible with the edge - Dirty or missing functional layer
5. Edge jams in the hopper	- Longitudinal warping or width fluctuation of the edge - Retaining device set too low
6. Machine temperature sensor switched off	- Incorrect laser coverage setting - Laser penetration due to insufficient colouring of the edge

Hot-Air technology:

Problem	Problem Diagnosis
1. Open joints on long edge	- Pressure setting too low - Incorrect pressure zone setting - Angularity of form cutting
2. Open joint in corner	- Edge and board feed not synchronised - Edge overhang too long/short - Hot-air application start/end not compatible
3. Too little adhesion/peel strength	- Edge and board feed not synchronised - Edge overhang too long/short - Hot-air application start/end not compatible
4. Functional layer smudged	- Temperature setting not compatible with the edge (correct specifications for RAUKANTEX pro) - Nozzle pressure too high
5. Edge jams in the hopper	- Lengthwise warping or width fluctuation of the edge - Retaining device set too low - Functional layer “jams” on edge guide (pull edge back during work breaks)
6. Machine temperature sensor switches off	- Check compressed air supply

Care for Environment

While our quest is to achieve a seamless joint and superior finish with Zero-joint edgebanding, the ecology and conservation of resources are important for REHAU too. Thus, we are able to reduce the need for adhesives and cleaning agents during the procedure.

We also use **ABS material** that is **ecological in nature** and **harmless to the health** of humans. As the material purity of the resulting waste remains intact, it also enables us to ensure environmentally friendly disposal.

- Seamless joint
- Environment Friendly
- Better moisture-resistant
- No glue
- Heat-resistant
- Highly Durable

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