
RAUVISIO FINO
Technical Information

**This Technical Information "RAUVISIO fino"
is valid from January 2018.**

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download at www.rehau.de/rauvizio-fino.

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1 INFORMATION AND SAFETY NOTES

Validity

This Technical Information is valid worldwide.

Latest version of the Technical Information

To ensure your safety and proper use of our products, please regularly check whether a more recent version of the technical information is available.

You can obtain the latest version of the document from your local retailer, your REHAU sales office or download it from www.rehau.de/rauvizio-fino.

Navigation

At the beginning of this technical information, you will find a detailed table of contents with the hierarchical headings and corresponding page numbers.

Pictograms and logos



Safety warnings



Legal notice



Important information



Information on the internet



Your benefits

Proper use

RAUVISIO products may only be planned, processed and installed in accordance with this Technical Information. Any other use is in violation of the specifications and is therefore prohibited.

Suitability of the material

The relevant, valid Technical Information is to be observed for the processing/assembly and use of RAUVISIO products. Our Technical Information is based on empirical values and knowledge acquired up to the time of printing. The transmission of this information includes no assurances as to the properties of the products described. No explicit or implicit guarantee may be derived from it.

The information does not release the user/purchaser from their obligation to assess the suitability of this material and the correct processing thereof to attain the required results in terms of objective and application.

Disclosure of information

It is essential to ensure that your customers, also including end customers, are aware of the necessity to observe the current Technical Information as well as instructions for the care and use for RAUVISIO products.

The instructions for use and care must be provided to the end customer either by yourself or by your customer.

Note to our distribution partners and customers that resell RAUVISIO products:

Please also inform your customers about the need to observe the current Technical Information and make them available to your customers.

Note to the processor:

Please ensure that at least the installation guidelines (chapter „7 Assembly guidelines“) and the instructions for use and care (chapter „8 Operating/maintenance instructions for end users“) are made available to your customers and processing and installation firms.

Safety information and installation instructions

Observe the instructions on the packaging, accessories and installation instructions. Keep the installation instructions handy for easy access.

If you do not understand the safety information or the individual installation procedures or if something is unclear, please contact your REHAU sales office.

Applicable guidelines and safety equipment

Strictly observe all applicable safety and environmental regulations as well as the regulations of the trade supervisory authority and the employers' liability insurance association. Such regulations always take precedence over the information and recommendations in this Technical Information.

Always use safety equipment such as

- Gloves
- Safety goggles
- Ear protection
- Dust mask

Adhesives and auxiliary materials

Strictly observe the safety instructions for any adhesives.

Always store work equipment such as alcohol-based cleaning products and other easily flammable materials in safe and well-ventilated places.

Ventilation/extraction, production dust

Ensure adequate ventilation and extraction for the processing machines.

If you inhale production dust, get fresh air and seek medical attention if you experience any symptoms.

Protective measures and disposal

RAUVISIO fino is a composite made of wooden substrate and polymer surface coating, which has ecologically sound properties. The dust that forms is not toxic. The dust concentration is to be minimised through suitable protective measures such as extraction or a dust mask.

Dust from RAUVISIO fino does not pose any specific risk of explosion.

Disposal code in accordance with the Waste Catalogue Ordinance:

- 170203/Construction and demolition waste consisting of wood, glass, plastic
- 120105/Waste from mechanical shaping processes and from the physical and mechanical surface treatment of metals and plastics (plastic shavings and lathe shavings)

Fire behaviour

Due to its composition of wooden substrate and PET foil, RAUVISIO fino demonstrates favourable fire behaviour and is classified as per DIN 4102-B2 as being of normal flammability. In case of fire, no toxic substances such as heavy metals or halogens are released. The same fire-fighting techniques can be used as for other construction materials containing wood.

Extinguishing fires

Suitable extinguishing agents for fighting fires are

- Water spray
- Foam
- CO₂
- Extinguishing powder

A water jet is unsuitable for safety reasons.

When extinguishing fires, wear appropriate protective clothing and, if necessary, a self-contained breathing apparatus.

2 PRODUCT DESCRIPTION

2.1 Product description

RAUVISIO fino highlights the current trends in furniture and living room design, whether with a high-gloss or super matt finish. A consistently high-quality finish is achieved due to the continuous lacquer laminating process carried out using rollers. The subsequent seamless connection of the board and the edgeband produces a component with a homogeneous surface. The result is the industrially manufactured product RAUVISIO fino, which proves an effective substitute for high-quality lacquered components.



RAUVISIO fino features the following advantages:

- High-gloss or super matt
- Hygienic
- Non-porous
- Can be processed using conventional woodworking tools
- Suitable for increased exposure to moisture (in conjunction with optimised moisture resistance edging)



Fig. 2-1 Using RAUVISIO fino

2.2 Individual components

Surface

RAUVISIO fino is a multi-layer, polymer surface, which is applied continuously using rollers.

The hard coat finish guarantees increased chemical and scratch resistance in matt and gloss variants.

Wooden substrate

The use of a homogeneous and finely sanded wooden substrate guarantees a smooth finish.

The thermoset balancing sheet applied enables reliable processing.

Edgeband

	RAUKANTEX pure	RAUKANTEX plus	RAUKANTEX pro ¹⁾
	Traditional primer edgeband	Entry-level invisible joint	Permanent zero-joint
Description	in all dimensions and decorative designs	The entry-level invisible joint: a coloured adhesive applied to the back of the edgeband ensures a visibly seamless joint once applied.	Perfect invisible joint thanks to 100 % polymer functional layer
Properties	Traditional edging	Invisible joint <ul style="list-style-type: none"> - Colouring of the adhesive layer in defined standard colours - Colour-matched adhesive layer 	Permanently invisible and functional joint <ul style="list-style-type: none"> - Precise colour matching of the polymer functional layer to the decorative designs - No rubbing off of the joint in daily usage
Delivery	Available as a customer specific item or via the REHAU standard stock range	Available via the REHAU standard stock range Minimum quantities and short delivery times	Available as a customer specific item or via the REHAU standard stock range
Processing	Conventional processing <ul style="list-style-type: none"> - Can be processed using all standard adhesive types - Processing using mechanical adhesive application - For straightline edgebander and edgeband processing centre 	Versatile processing <ul style="list-style-type: none"> - Can be processed using laser, hot-air, plasma and NIR - Suitable for straightline edgebander and edgeband processing centre 	

1) For components with increased exposure to moisture, the use of a RAUKANTEX pro OMR Optimized Moisture Resistance edgeband is recommended

2.3 RAUVISIO fino composite pressed board

RAUVISIO fino is available as large format pressed board (1220 x 2800 mm) consisting of lacquer laminate and melamine-coated MDF board with a melamine coated balancing sheet.



Fig. 2-2 RAUVISIO fino composite pressed board

3 TRANSPORT, PACKAGING AND STORAGE

3.1 Transport and loading information



Check the exterior packaging for damage immediately when the goods arrive:

- If damage has occurred, open the packaging in the presence of the freight carrier and record the damage to the goods.
- This must be confirmed by the haulier with their name, company, date and signature.
- The damage must be reported to the haulier within 24 hours.

Otherwise the haulier's insurance company will not accept liability.

Transport

The boards must not be exposed to temperatures higher than 50 °C during transport to avoid thermal overloading of the adhesive/laminate system.

Exposure to extreme temperatures may cause the adhesive and surface laminate to interact, which can result in orange peel/rippling and thus adversely affect the appearance.

Delivery

Boards are shipped loaded on square timber battens or pallets to ensure they are kept flat.

- Ideally, packaging units should be unloaded with a forklift or similar appliance.
- If the required equipment is not available, the boards can be unloaded by hand. When doing this, it must be ensured that the boards do not become dirty and are not subjected to any mechanical loads.
 - Suitable protective equipment, such as gloves, should be worn during manual handling as sharp edges can cause cuts.
 - The use of transport aids such as suction lifters, lift handles and board transporters is recommended for handling; see also chapter „4.1 Decompressing“.
 - Bending is not permitted when transporting the RAUVISIO boards horizontally.

3.2 Packaging



Protect the boards with foam non-woven material.

With RAUVISIO fino, the narrow edges and surfaces must be protected under all circumstances. Particularly when moving, picking and further processing the boards, avoid or remove any dirt or foreign materials that may get between the individual boards. Otherwise the stack weight / dead weight of the boards will inevitably lead to pressure marks on the laminate surface.

- Protect the surfaces with foam non-woven material. This will prevent any impurities from marking the surface when pressure is applied to the surfaces.



Please observe the handling instructions for our RAUVISIO products.

3.3 Internal transport and storage

Internal transport

RAUVISIO fino must be kept flat, level and fully supported along its entire length during transportation.

Ideally RAUVISIO fino should be transported in its original packaging. No repacking recommended.

Storage

RAUVISIO fino is supplied on pallets or square timber battens covered with appropriate protective boards. The packaging units with RAUVISIO fino are stackable. Due to the stack pressure, however, it is not permitted for more than four packaging units to be stacked on top of one another.

In the event of storage in conditions not in line with those described above (pallet or on at least 4 equal battens), no assurances can be given against warping.

The material must be stored in closed, heated rooms in which the room temperature is between 15 and 25 °C and the relative humidity is between 40 and 60%.

Before opening the packaging unit, the goods must have an acclimatisation period at room temperature of at least 48 hours or longer depending on the season.

After opening and removing a quantity of the product, it must be ensured that the cover panel remains on top of the goods during re-storage, in order to prevent soiling and asymmetrical temperature/humidity effects (e.g. through draughts or heated air) and thus counteract warping or surface damage.



Protecting the packaging units:

The packaging units are to be protected against damage, large fluctuations in temperature and humidity, as well as high UV levels of artificial lighting or direct sunlight.

Store boards flat and level.

RAUVISIO fino must be kept flat, level and fully supported along its entire length during storage and transportation.

It is recommended to store boards on the supplied pallet.

Alternatively, boards must be supported by a minimum of 4 evenly spaced timber battens of equal size (see diagram). This will prevent bending or warping.

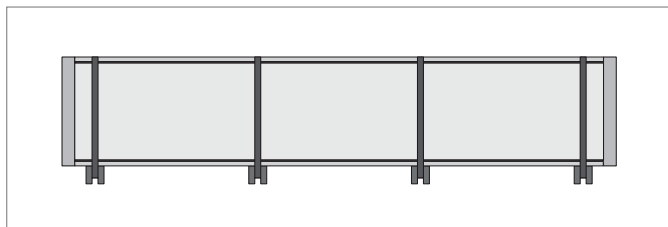


Fig. 3-1 Four-timber storage

4 PRIOR TO PROCESSING

4.1 Unpacking

Before opening the packaging unit, the goods must have an acclimatisation period at room temperature of at least 48 hours or longer depending on the season.



Carefully unpack the boards.

When opening the packaging, ensure that the surfaces are not damaged by sliding or sharp objects. Appropriate lifting technology must be used to separate the boards.

Open the packaging with package shears.

Do not use sharp objects!

1. Cut the packaging tape.
2. Cut the protective foil vertically.
3. With 2 people and 4 suction cups carefully lift the top board vertically, without sliding it, or carefully remove carton if individually packed.
4. Remove any detritus or contamination that gets between the individual boards.

4.2 Checking the boards



Please check the RAUVISIO fino system components for the following points before further processing, i.e. finishing the goods (see chapter „4.4 Documents for the material warranty“):

- External damage such as cracks or dents
- Surface damage or blemishes
- Planarity (for pressed boards)
- Colour uniformity within the production batch

The surfaces of RAUVISIO fino are always supplied with a protective film applied. Despite this protective film, it may be that there are occasional minor defects in the laminates on delivery. This cannot be avoided completely due to the production process and does not represent a direct cause for complaint.

When grouping different boards into one order, it is to be ensured that only boards of the same production number are used.

When processing sheets with different batch numbers, it is imperative to check the colour compatibility prior to processing.

Colour consistency should be checked in natural daylight, although bright sunlight should be avoided. In case of deviations a colorimeter should be used.



Any costs resulting from checking the above points shall not be borne by REHAU. This also applies to follow-on costs in the subsequent processing of defective goods.

4.3 Conditioning



RAUVISIO fino and all other materials to be processed such as the adhesive and edgebands must be conditioned at room temperature (at least 18 °C) for a sufficient period of time (at least 48 hours).

Processing is also carried out at room temperature. It is to be ensured, in particular in the colder months, that conditioning of all boards takes place. If the size of the stack prevents the boards in the middle from acclimatising sufficiently, the acclimatisation period must be extended accordingly.

4.4 Documents for the material warranty

In order to process complaints, the delivery notes for the goods and the shipping labels must be retained.

The imprint on the narrow side of the substrate can be used to clearly identify the production batch. This must be communicated to the REHAU sales office in the event of a complaint.

5 PROCESSING RAUVISIO FINO

5.1 Proper handling of RAUVISIO boards

Placing the boards on the machine table

The machine table must be of sufficient size, have no sharp edges and must be thoroughly cleaned.

Alternatively, cover the machine table with a clean base (wooden board, cardboard, etc.)

Formatting the boards

The nesting procedure is recommended to format the board. When formatting with a saw, be sure to observe the instructions for placing the board on the machine table (see above). In this case, work with a scoring saw blade.

Between the processing steps

After milling/sawing, all residue must be removed and all surfaces cleaned.

For transport, place the boards vertically and individually on appropriate trolleys.

Alternatively: Stack the boards on a pallet with a clean and pliable layer of cardboard or foam between them.

Edging the boards

When edging the boards, work with a static inhibitor to prevent shavings from sticking to them. Ensure that the boards are fed into the machinery in a clean state and orderly fashion. Any shavings or dust must be safely removed through the extraction unit.

Drilling and milling

When drilling/milling, any sawdust or shavings must be safely removed, e.g. through suction or blowing.

Packing the boards

Stack the workpieces in layers with clean and padded carton/foam material inserted in-between each layer on a pallet.

Use a transport lock to prevent damage due to slipping or similar.

5.2 Mechanical processing of the pressed board

Sawing/milling/drilling

RAUVISIO fino can be processed with most conventional woodworking tools. When cutting RAUVISIO fino, a scoring saw blade must be used.

In order to enable precise processing, it must be ensured that the tools are sharp and that ideal machine settings are used. It is recommended that the optimal machine settings are determined by means of trials prior to starting production.

5.3 Thermoforming of RAUVISIO fino

RAUVISIO fino can be thermoformed in the same way as any other thermoplastic material.

It is to be ensured that the heat input into the material is not too high - this will result in an "uneven surface". If the heat input is too low, this may cause stress cracks, or frozen-in tension that may release later on and cause cracks.

Thermoforming is therefore a very delicate area of application where the production process must be matched precisely to the surface.

5.4 Edging

The use of RAUKANTEX edgeband material is recommended to create an interlocking joint between the RAUVISIO fino surface and the narrow surface. The best visual results are achieved by using RAUKANTEX pro. No joint line is visible here thanks to the colour-matched polymer functional layer of the edgeband colour. A range of matching RAUKANTEX ABS edgeband is available to compliment this product. This edgeband material can be polished, resulting in a finished component with an impressive invisible joint.

The correct processing method is described in the processing guidelines Technical Delivery Specifications Sales RAUKANTEX (DML00513). For more information, please contact your REHAU sales office. The resulting component quality (e.g. adhesion of the edgeband, appearance and performance characteristics) depends on the machine configuration and the raw materials and must be checked by the processor.

Optimum machine parameters, tool configuration and cutting speeds are to be established individually prior to production using a series of samples; the REHAU applications engineering department will be happy to support you with this.

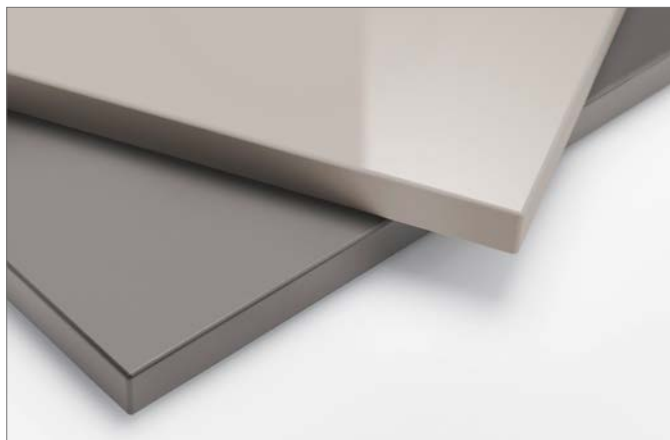


Fig. 5-1 RAUVISIO fino and RAUKANTEX with polished radius

i REHAU offers its customers both the standard primed edgeband RAUKANTEX pure and the 100 % polymer zero-joint edgeband RAUKANTEX pro. For components exposed to moisture, use of the zero-joint edgeband RAUKANTEX pro OMR is recommended.

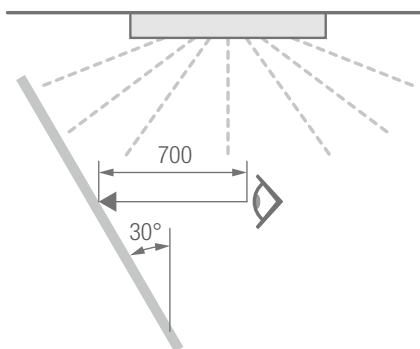
6 TECHNICAL DATA

RAUVISIO fino denotes a composite made of MDF board and lacquer laminate. The lacquer laminate here consists of a polymer base layer and a hard coat finish.

RAUVISIO fino is designed for furniture/design surfaces that are used in vertical interiors. The surface is protected by a **PE foil**, which must only **be removed at the installation location**.

Product data	Test standard	RAUVISIO fino pressed board on directly coated substrate MDF substrate 18 mm
Thickness	as per technical drawing as per DIN 324-1	18.4 mm ± 0.4 mm
Width	as per technical drawing as per DIN 324-1	1220 mm ± 3 mm
Length	as per technical drawing as per DIN 324-1	2800 mm ± 5 mm
Angle deviation	as per technical drawing as per DIN 324-2	± 2 mm/m
Edge defects	as per technical drawing	15 mm
Weight per square metre		14.7 kg/m ²

Visual properties	Test standard	Requirement	Test result
Gloss level of the surface	AMK-MB-009, 04/2013	Measurement with 60° measurement geometry	≥ 85 GLE high gloss ≤ 7 GLE matt
Colour	AMK-MB-009, 04/2013	No significant changes to the master sample; uniform covering properties	Fulfilled
Surface	AMK-MB-009, 04/2013	Uniform surface, surface defects must not have a distracting effect from a distance of 0.7 m. A totally flawless surface is not feasible due to production tolerances. Some minor surface irregularities are possible.	Fulfilled



Lightfastness	Based on DIN EN ISO 4892-2, process B		
	Duration of the test: to DIN EN ISO 105 B01-B06	Assessment according to the blue scale	grade 6
	Assessment of the sample: to DIN EN ISO 105 A02	Assessment according to the grey scale	≥ level 4

Material properties	Test standard	Requirement
Fire behaviour	DIN 4102/1	B 2
Material purity/sand content (lacquer laminate)	Ignition residue after test specification	≤ 1%
Density (lacquer laminate)	DIN EN ISO 1183-1 process A (04/2013)	≥ 1.42 g/cm ³

Surface properties	Test standard	Test result	
Chemical resistance ¹⁾	DIN 68861 / T1 1A/1B	See "Substances" table page 16	
		RAUVISIO fino gloss	RAUVISIO fino matt
Scratch-resistance	DIN 68861/T4	Class 4F	Class 4F
Micro-scratch resistance	DIN CEN TS 16611 process A	Change in gloss level 15% (Measurement with 60° measurement geometry)	Change in gloss level 8% (Measurement with 60° measurement geometry)
	DIN CEN TS 16611 process B	Class 4	Class 3

1) The testing of the chemical resistance as per DIN 68861-1 includes the substances listed in the table on page 16; other substances have not been tested specifically and are to be tested separately by the customer.

7 INSTALLATION GUIDELINES

1. Fabricated components should only be transported on the original packaging unit.
2. Always unload packaging units sideways and from the middle.
3. Fabricated components should always be stored on the original pallet or using four-timber storage.
4. The storage of the fabricated components must not be stored outside or in damp environments.
5. Fabricated components should always be stored appropriately at the installation location and not exposed to strong UV light sources.
6. Acclimatise fabricated components prior to installation for at least 24 hours at room temperature (min. 18°C). At delivery temperatures below 0 °C, acclimatise the elements for at least 48 hours on all sides.
7. No objects are to be rested on raw boards and fabricated components as these could cause damage.
8. RAUVISIO fino is suitable for vertical applications indoors. Enquire and check with the manufacturer about special application cases if necessary.
9. All materials and components must be checked for damage or defects prior to processing / assembly.
10. Temporary storage must take place prior to installation exclusively in the original packaging in frost-free and closed rooms.
11. Load-bearing substructures, which are firmly connected to each other, are to be aligned so that they are flat and vertical.
12. To avoid stress cracks no bending should occur during processing and assembly.
13. Do not bring unprotected corner connections of wooden substrates into contact with moisture prior to assembly.
14. In the case of wooden substrates all cut edges and raw board edges must be sealed so that they are watertight.
15. All drilled holes in the wooden substrates must be sealed during assembly so that they are watertight.
16. Tools must not be used on the surface.
17. No strong solvents, special cleaners (e.g. drain cleaners, industrial cleaners, lubricants or abrasive cleaning cloths) or strong chemical substances must be used on the surface.
18. Heavy dirt can cause scratches during cleaning, therefore always clean dirty areas carefully with a microfibre cloth.
19. Do not stand on unassembled or assembled RAUVISIO fino components.
20. Assembly for indoor vertical applications only.

8 OPERATING/MAINTENANCE INSTRUCTIONS FOR END USERS



The non-porous, homogeneous lacquer laminate is hygienic and suitable for contact with foodstuffs and is resistant to fungal and bacterial growth.



RAUVISIO fino is a polymer surface material that is pleasant and warm to the touch.



RAUVISIO fino is resistant to most substances found in the household. An extended exposure to aggressive substances can leave behind marks or damage the material.

The table shows the mediums tested and the exposure time:

Substances	Stress group 1A/1B RAUVISIO fino	
	D	Result
Acetic acid	16 h	5
Citric acid	16 h	5
Ammonia water	16 h	5
Ethyl alcohol	16 h	5
Red wine	16 h	5
Beer	16 h	5
Cola	16 h	5
Coffee	16 h	5
Black tea	16 h	5
Blackcurrant juice	16 h	5
Evaporated milk	16 h	5
Water	16 h	5
Petrol	16 h	5
Acetone	10 s	5
Ethyl-butylacetate	10 s	5
Butter	16 h	5
Olive oil	16 h	5
Mustard	16 h	4
Onion	16 h	5
Disinfectants	10 min.	5
Cleaning agent	16 h	5
Cleaning solution	16 h	5

Assessment according to DIN EN 12720 (07/2009)	
Chemical durability	Result
5	No visible change
4	Just noticeable change in gloss or colour
3	Slight change in gloss or colour; the structure of the test surface is not changed
2	Heavy marks visible; the structure of the test surface is however largely undamaged
1	Heavy marks visible; the structure of the test surface is changed
0	Test surface severely changed or destroyed

T Exposure time

A Requirement as classification code to DIN EN 12720:2009-07

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