

A person is sitting on a dark grey, modern-style bench. The bench has a thick, tufted cushion and a dark grey fabric cover. Behind the person, there are two decorative pillows: one with a textured, knitted pattern and another with a geometric, woven pattern. The person is wearing a blue shirt, dark trousers, and white sneakers. The background is a light-colored wall. The lighting is soft and warm, creating a cozy atmosphere.

**Engineering progress
Enhancing lives**

RAUVISIO noir HPL

Technical information



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This "RAUVISIO noir" technical information is valid from October 2020.

You will find our current technical documentation available for download at www.rehau.com/TI.

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All dimensions and weights are approximate. Subject to errors and modifications.

01 Information and safety instructions

Validity

This technical information is valid for Germany.

Current relevance of the technical information

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

You can obtain the current version of the document from your local dealer, your REHAU sales office or you can download it from

www.rehau.com/de-de/rauvisio-noir.

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 notice



Legal notice



Important information which must be observed



Your benefits



Information available online

Intended use

RAUVISIO products may only be configured, installed and operated as described in this technical information. Any other use is deemed to be outside the intended scope of application.

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 dissemination of this information does not comprise any assurance of 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 care and usage instructions must be made available to the end customer either by you or by your customers.

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

Please also inform your customers of the need to follow the current technical information and make this available to them.

Note to the processor:

Please ensure that at least the installation guidelines (chapter "7 Installation guidelines") and the care and usage instructions (chapter "8 Care and usage instructions for the end user") are handed over to your customers and to fabrication and installation companies.

Relevant regulations and safety equipment

All applicable safety and environmental regulations as well as the regulations of the trade supervisory centre and professional association must be strictly observed. These always take priority over the instructions and recommendations given in the technical information.

Always use safety equipment such as

- Gloves
- Protective goggles
- Ear protection
- Dust mask

Adhesives and additional tools

Observe the safety regulations for the adhesives used and ensure that they are strictly observed.

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

Ventilation/extraction, production dust

Ensure good ventilation and extraction around the processing machines.

If production dust is inhaled, provide fresh air and in the event of symptoms seek medical advice.

Health and safety at work and disposal

RAUVISIO noir is a composite made of wooden substrate and thermoset surface coating, which has ecologically sound properties. The dust created during processing is not toxic. The dust concentration is to be minimised through suitable protective measures such as extraction and use of a dust mask.

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

Disposal code in accordance with the Waste Catalogue Regulation:

- 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 thermoset laminate, RAUVISIO noir demonstrates favourable fire behaviour and is classified to DIN 4102-B2 as normal flammability. In the event of a fire, no toxic substances such as heavy metals or halogens are released. The same fire-fighting techniques can be used as for other building materials containing wood.

Fire-fighting

Suitable extinguishing agents for fire-fighting are

- Water spray
- Foam
- CO₂
- Extinguishing powder

A solid-stream water jet is unsuitable for safety reasons.

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

02 Product description

02.01 Product description

RAUVISIO noir as a supermatt finish highlights the current trends in furniture and living room design. Pressing RAUVISIO noir into a substrate board forms a furniture board which is well integrated in the current process landscape. The subsequent seamless connection of the board and the edgeband produces a component with a homogeneous surface. This creates an industrially manufactured product – RAUVISIO noir – that sets a new benchmark in the matt RAUVISIO family.



RAUVISIO noir has the following advantages:

- Supermatt
- Hygienic
- Non-porous
- Can be processed using conventional woodworking tools
- Suitable for applications with high exposure to moisture



Fig. 02-1 RAUVISIO noir in use

02.02 Individual components

Surface

RAUVISIO noir is a thermoset surface made of several layers, in short HPL (High Pressure Laminate), that is manufactured as laminate under pressure and temperature.

The electron beam-hardened coating ensures high scratch resistance in matt.

Wooden substrate

The wooden substrate as support ensures the process capability and forms the link between the thermoset balancing sheet and cover material made of HPL.

Edgeband

	RAUKANTEX pure Traditional primer edgeband	RAUKANTEX plus Entry-level invisible joint	RAUKANTEX pro ¹⁾ Permanent zero-joint
Description	Available in all dimensions and décors	The zero joint entry-level: A pre-coating of coloured adhesive on the reverse of the edgeband ensures an invisible zero joint on the component	Perfect zero joint through 100% polymer functional layer
Properties	Traditional edging	Invisible zero joint <ul style="list-style-type: none"> ▪ Colouring of the adhesive layer in defined standard colours 	Permanently invisible and functional zero 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 **Optimised Moisture Resistance** edgeband is recommended

03 Transport, packaging and storage

03.01 Transport and loading information

Transport

Under no circumstances should the boards be exposed to temperatures higher than 50 °C during transport to avoid thermal overloading of the adhesive/laminate system. Under thermal load, there could be reciprocal actions between the coatings that may result in warping. This would affect the flatness of the board.

03.02 Packaging



Protect the boards with foam wrap.

In the case of RAUVISIO noir, it is essential to protect the narrow sides and the surface. Particularly when moving, picking and further processing the boards, avoid or remove any dirt that may get between the individual boards. Otherwise, the stack pressure/dead weight of the boards can inevitably lead to pressure marks on the laminate surface.

Protect the surfaces with foam wrap.

This will prevent marks being caused on the surface when stacking components.



Please observe the handling instructions for our RAUVISIO products.

03.03 Internal transport and storage



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 noir board material must be stored and transported in a flat and level position with support along its complete length. It is recommended to store boards on the supplied pallet. Alternatively, boards must be supported by a minimum of four evenly spaced timber battens of equal size (see diagram). This is necessary to prevent bending or warping.

In the event of storage in conditions not in line with those described above (pallet or on at least four 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%.

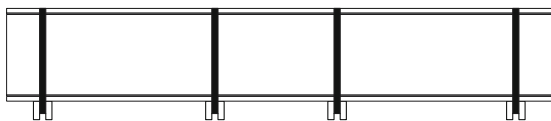


Fig. 03-1 Storage on four timber battens

04 Prior to processing

04.01 Unpacking



Carefully unpack the boards.

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

Open the packaging with scissors.

Do not use a sharp blade!

1. Cut the packaging tape.
2. Cut the protective film away from sheets.
3. Two people and four vacuum lifting pads lift the uppermost cover board vertically towards the top with care and without displacing it or remove the box in the case of individual packaging.
4. Dirt which can get trapped between the individual boards must be completely avoided or removed.

04.03 Conditioning



RAUVISIO noir 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 must be ensured, particularly in the colder months, that all boards are acclimatised. If there is insufficient acclimatisation of the boards due to the stack size, the exposure time should be adjusted accordingly.

05 Processing RAUVISIO noir

05.01 Proper handling of RAUVISIO boards

Placing the boards on the machine table

The machine table must be large enough, must not have any sharp edges and must have been thoroughly cleaned.

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

Formatting the boards

When formatting with a saw, please observe the instructions for placing the board on the machine table (see above). In this case, work with a scoring 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 workpieces in layers with clean and padded cardboard/foam material inserted in-between on a pallet.

Edging the workpieces

Anti-static agents should be used whilst edgeband is being applied. Ensure that the boards are fed into the system cleanly and safely.
Any loose chipping created must be safely removed via extraction.

Drilling and milling

Extraction must be used during drilling/milling operations to ensure that the swarf is removed.

Packing the workpieces

Stack the workpieces in layers with clean and padded cardboard/foam material inserted in-between each layer on a pallet.
Use a transport lock to prevent damage due to slipping or similar.

05.02 Mechanical processing of the pressed board

Sawing/milling/drilling

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

To allow accurate processing, it must be ensured that all tools are sharp, and optimal machine settings are used. Due to its robust and brittle surface, it is recommended to work with cutting materials made from chrome vanadium alloys or diamond. For milling, milling cutters with a blade angle of $> 45^\circ$ that can make an oblique cut are proven of value.



If you have questions regarding processing, a REHAU applications engineer would be happy to help you further.

05.03 Edging

The use of RAUKANTEX edgeband material is recommended to create an interlocking join between the RAUVISIO noir 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 (acrylonitrile butadiene styrene) edgeband is available to compliment this product.

The correct processing method is described in the usage instructions 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 application qualities) depends on the machine configuration and the raw materials and must be checked by the processor.



Optimum machine settings, 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. 05-1 RAUVISIO noir and RAUKANTEX

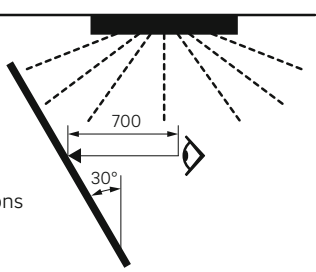


REHAU offers its customers both the standard primed edgeband RAUKANTEX pure and the 100% polymer zero-joint edgeband RAUKANTEX pro. For components exposed to moisture, use of the zero-joint edgeband RAUKANTEX pro OMR is recommended.

06 Technical data

RAUVISIO noir is a non-porous, homogeneous, high-density material produced using the impact of pressure and heat. The core consists of waterproof papers that develop the thermoset character. The decorative surface also consists of a waterproof paper furnished with an electron beam-hardened acrylate

hard coat layer. RAUVISIO noir is designed for furniture/ design surfaces that are used in vertical or horizontal interiors. The surface is protected by a PE film, which must only be removed at the installation location.

Visual properties	Test standard	Requirements	Test result
Gloss level of the surface	AMK-MB-009, 04/2013	Measurement with 60° geometry Measurement with 85° geometry	≤ 2 GLE ≤ 10 GLE
Colour	AMK-MB-009, 04/2013	No significant change to the limit sample; even covering properties	Fulfilled
Surface	AMK-MB-009, 04/2013	<p>Uniform surface, surface defects must not affect the overall appearance from a distance of 0.7 m. A flawless surface cannot be guaranteed due to the industrial production process, small imperfections and surface irregularities are permissible.</p>  <p>Spots, dirt, imperfections and similar surface defects; fibres, hairlines or scratches</p>	<p>Fulfilled</p> <p>≤ 1 mm²/m² ≤ 10 mm/m²</p>
Light fastness	Based on DIN EN ISO 4892-2, Process B Duration of the test: to DIN EN ISO 105 B01–B06 Assessment of the sample: to DIN EN ISO 105 A02	Assessment according to the blue scale Assessment according to the grey scale	Level 7 ≥ Level 4

Material properties of the layer material	Test standard	Requirements	Test result
Density	EN ISO 1183	$\geq 1.35 \text{ g/cm}^2$	Fulfilled
Resistance to immersion in boiling water	DIN EN 438-2	\geq Level 4	Fulfilled
Dimensional accuracy during increased temperature	DIN EN 438-2	~0.55% longitudinal ~1.05% transversal	Fulfilled
Resistance against impact stress (small ball)	DIN EN 438-2	$\geq 20 \text{ N}$	Fulfilled
Resistance to impact stress (big ball)	DIN EN 438-2	1,000 mm drop height Impression less than 10 mm	Fulfilled
Susceptibility to cracking if under load	DIN EN 438-2	\geq Level 4	Fulfilled

Surface properties of the coating material	Test standard	Requirements	Test result
Resistance to surface abrasion	DIN EN 438-2	$\geq 200 \text{ IP}$	Fulfilled
Resistance to water vapour	DIN EN 438-2	Level 5	Fulfilled
Resistance to dry heat (160 °C)	DIN EN 438-2	Level 5	Fulfilled
Resistance to moist heat (100 °C)	DIN EN 438-2	Level 5	Fulfilled
Scratch-resistance	DIN EN 438-2	Level 4	Fulfilled
Micro-scratch resistance	DIN EN 438-2	Procedure A Procedure B	$\leq 15\%$ change to glossiness \geq Class 4

Food and hygiene properties	Test standard	Requirements	Test result
Chemical resistance	DIN 68861/T1	1A	See "Substances" table page 16
Contact with foodstuffs – overall migration	EN 1186	Acetic acid 3% Ethanol 50% Ethanol 95% Isooctane	$\leq 10 \text{ mg/dm}^2$ $\leq 10 \text{ mg/dm}^2$ $\leq 10 \text{ mg/dm}^2$ $\leq 10 \text{ mg/dm}^2$
Hygiene	NSF/ANSI 35	Conformity to NSF/ANSI 35	Fulfilled
Antibacterial effect	JIS Z 2801:2012	Antibacterial activity of Staphylococcus aureus and Escherichia coli after 24 h	$\geq 3 \text{ log reduction}$ $\geq 99.9\%$ reduction

Environmental properties	Test standard	Requirements	Test result
VOC emission	AFNOR NF EN ISO 16000-9	Classification TVOC emission	A+ $\leq 0.2 \text{ mg/m}^3$
Phenolic content	AFNOR NF EN ISO 16000-9	Phenol detection limits	$< 0.002 \text{ mg/m}^3$
Formaldehyde emission	EN 13986	Classification E1	Fulfilled

07 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 equal battens.
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 components 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 noir is suitable for vertical and horizontal 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 installation.
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, abrasive cleaners or abrasive cleaning cloths) or strong chemical substances may be used on the surface.
18. "Magic erasers" have proved to work best for cleaning matt surfaces.
19. Do not stand on unassembled or assembled RAUVISIO noir components.
20. Installation for indoor vertical and horizontal applications only.

08 Care and usage instructions for the end user



The non-porous, homogeneous coating layer is hygienic and suitable for contact with foodstuffs as well as being resistant to fungus and bacteria.



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

The table shows the media tested and the exposure time:

Substances	Stress group 1A RAUVISIO noir	
	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	16 h	5
Ethyl-butylacetate	16 h	5
Butter	16 h	5
Olive oil	16 h	5
Mustard	16 h	4
Onion	16 h	5
Disinfectants	16 h	5
Cleaning agent	16 h	5
Cleaning solution	16 h	5

T Exposure time

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



RAUVISIO noir is a warm thermoset surface material that is pleasant to the touch.



No scouring or alcoholic cleaning agents may be used for cleaning; there is a risk that these will attack and damage the surface. Coarse dirt must first be cleaned using a soft cloth (microfibre cloth) and soapy water. Afterwards, you can use a "magic eraser" to create a homogeneous, matt appearance.

Assessment according to DIN EN 12720 (07/2009):

Chemical resistance	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

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.





We're never far away.
Exactly where is shown at
www.rehau.com/locations

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Our verbal and written advice with regard to usage is based on years of experience and standardised assumptions and is provided to the best of our knowledge. The intended use of REHAU products is described comprehensively in the technical product information. The latest version can be viewed at

www.rehau.com/TI. We have no control over the application, use or processing of the products. Responsibility for these activities therefore remains entirely with the respective user/processor. Where claims for liability nonetheless arise, they shall be governed exclusively according to our terms and conditions, available at www.rehau.com/conditions, insofar as nothing else has been agreed upon with REHAU in writing. This shall also apply for all warranty claims, with the warranty applying to the consistent quality of our products in accordance with our specifications. Subject to technical changes.

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