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RAUVISIO brilliant

Technical information



REHAU

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This technical information pertaining to the "RAUVISIO brilliant" is valid from April 2021 onwards.

With the publication of this document, the previous versions are no longer valid.

Our current technical documents are available for download at www.rehau.de/rauvizio-brilliant.

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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 worldwide.

Current relevance 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 current version of the document from your specialist retailer, your REHAU sales office or you can download it at www.rehau.de/rauvisio-brilliant.

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

Our valid technical information is to be observed for the processing/installation and use of RAUVISIO brilliant. 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 of RAUVISIO brilliant.

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 press RAUVISIO acrylic laminates and resell the laminated boards: Please also inform your customers of the need to follow the current technical information and make this available to them.

Note to processors of pressed acrylic laminate boards: Please ensure that at least the installation guidelines (chapter "9 Installation guidelines") and the care and usage instructions (chapter "10 Care and usage instructions for the end user") are handed over to your customers and to fabrication and installation companies.

Safety instructions and installation instructions

Observe the information on packaging, accessory parts and installation instructions. Keep the installation instructions so that they are always available. If you do not understand the safety instructions or installation recommendations, or if there is any uncertainty with regard to their content, please contact your local REHAU sales office.

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 tools 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.

Protective measures and disposal

RAUVISIO brilliant is a coextruded material made from acrylic and styrene copolymer that is not harmful to the environment. The dust that forms 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 brilliant presents no 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 the main constituents acrylic and styrene copolymer, RAUVISIO brilliant demonstrates favourable fire behaviour and is categorised to DIN 4102-B2 as normal flame resistance. 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 construction 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 fire-fighting, wear suitable protective clothing and if necessary standalone breathing apparatus.

02 Product description

02.01 Product description

As an acrylic laminate, RAUVISIO brilliant represents the latest trends in furniture design and interior design. The seamless joining of boards and edges results in a flawless, high-gloss or matt component. Thanks to its brilliant depth effect, RAUVISIO brilliant replaces high-quality paint elements when designing surfaces.



Fig. 02-1 RAUVISIO brilliant for high-gloss surfaces

RAUVISIO brilliant has the following advantages:

| | RAUVISIO brilliant | RAUVISIO brilliant SR |
|---|-----------------------|------------------------------------|
| High gloss | ✓ | ✓ |
| Matt | | ✓ |
| Hygienic | ✓ | ✓ |
| Water-tight | ✓ | ✓ |
| Can be thermoformed | ✓ | |
| Non-porous | ✓ | ✓ |
| Can be processed using conventional woodworking tools | ✓ | ✓ |
| High tension force | ✓ | ✓ |
| Repair of signs of wear possible | ✓ | |
| High chemical resistance | | ✓ |
| High scratch resistance | | ✓ |
| Monitoring of production centres, TÜV certification | ✓ | ✓ |
| For RAUVISIO brilliant complete | | For RAUVISIO brilliant SR complete |

Tab. 02-1 Advantages of RAUVISIO brilliant



02.02 Individual components

All RAUVISIO brilliant components can be ordered separately:

RAUVISIO brilliant (high-gloss laminate)

RAUVISIO brilliant is a multi-layer coextruded polymer laminate produced from a styrene copolymer base layer and an acrylate top layer. Due to the 0.7–0.8 mm thick material combination, RAUVISIO brilliant achieves a high tension force that has a positive effect on the surface smoothness and, in combination with a wooden substrate board, creates a mirror gloss surface.

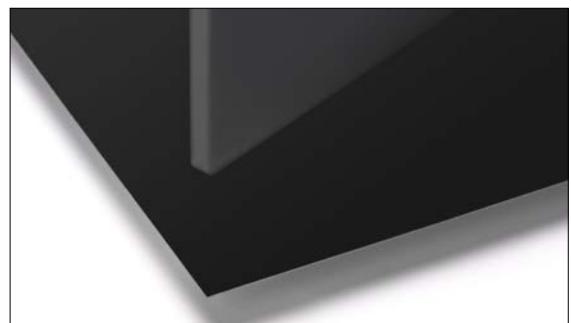


Fig. 02-2 RAUVISIO brilliant for high-gloss surfaces

RAUVISIO brilliant SR (high-gloss laminate)

RAUVISIO brilliant SR (high-gloss laminate) is used in places where a high level of chemical and scratch resistance is required. This is achieved by means of a special hard coating.

RAUVISIO brilliant SR (matt laminate)

RAUVISIO brilliant SR (matt laminate) is a hard-coated matt variant which behaves like the high-gloss SR surface in terms of its properties. The only difference is the gloss level of the hard coating.

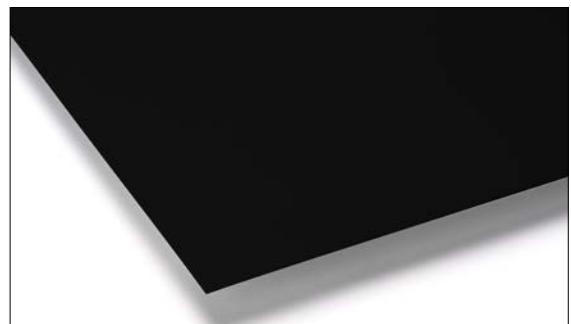


Fig. 02-3 Matt laminate RAUVISIO brilliant SR in the colour moro

Balancing sheet (embossed)

Our specially developed balancing sheet is a perfect colour match for the acrylic laminate. The material thickness of the balancing sheet of 0.7–0.8 mm ensures minimal warpage of the laminated board.

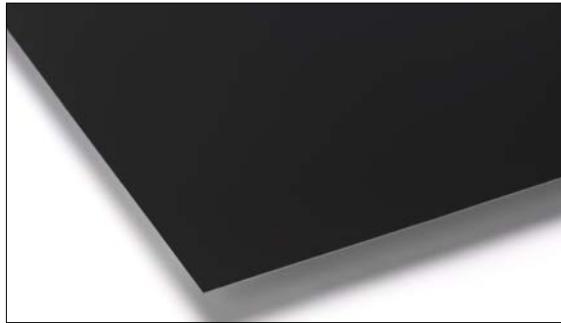


Fig. 02-4 RAUVISIO brilliant balancing sheet in the colour moro

Edgeband collection

Whether high-gloss or matt uni-edge, V-groove or 3D look – REHAU offers up to seven different edge design lines for RAUVISIO brilliant (SR) that leave nothing to be desired. In total there are more than 60 edge types available from stock, all perfectly colour-matched to the surface.

As usual with REHAU, all edges are available as RAUKANTEX pure, RAUKANTEX plus or RAUKANTEX pro.



Fig. 02-5 RAUVISIO brilliant edge collection in the colour moro

02.03

RAUVISIO brilliant composite pressed board

RAUVISIO brilliant is also available as a large pressed board (1,300 x 2,800 mm), consisting of acrylic laminate, MDF board and colour-matched balancing sheet.

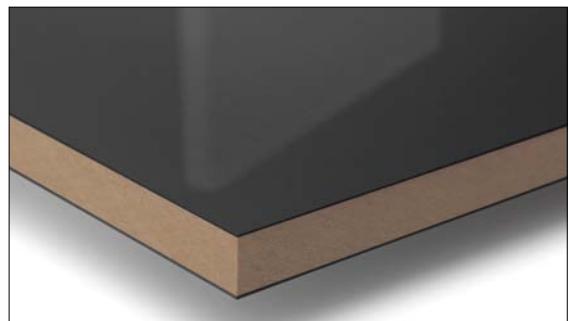


Fig. 02-6 RAUVISIO brilliant balancing sheet in the colour moro

02.04

Finished component RAUVISIO brilliant complete

Use the REHAU surface configurator to select RAUVISIO brilliant components and the matching edgebands and we'll deliver individually fabricated zero-joint fronts, or even one-offs.



Fig. 02-7 RAUVISIO brilliant complete finished component in the colour moro

03 Transport, packaging and storage

03.01 Transport and loading information



The external packaging must be immediately checked for signs of damage upon receipt of the goods:

- 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 driver of the haulage company with their name, haulage company, date and signature.
- The damage must be reported to the freight carrier within 24 hours.

In the event of a failure to comply with this, the freight carrier's insurance company will not accept liability!

Transport

Under no circumstances should the boards be exposed to temperatures higher than 60 °C during transport to avoid thermal overloading of the adhesive/laminate system.

In the case of increased thermal loading there may be interaction between the adhesive and acrylic laminate that may result in orange peel/waviness and will therefore impair the mirror gloss finish.

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 appropriate lifting equipment is not available, the boards/laminate can be unloaded by hand. If manually unloading, precautions must be taken to ensure the boards/laminate are kept clean and are not subjected to undue mechanical loads (twisting, folding, bending, etc.).
- When unloading by hand, wear suitable protective equipment, e.g. gloves, 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 "5.1 Unpacking".
- Bending is not permitted during lifting and movement of the RAUVISIO brilliant boards.

03.02 Packaging



Protect the boards with foam non-woven material.

With RAUVISIO brilliant the edges and surfaces must be protected. 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 will inevitably cause indentations in the laminate surfaces.

- Protect the surfaces with foam wrap. This will avoid marks being caused on the surface when stacking components.

03.03 Internal transport and storage

Inter-company transport

While being moved RAUVISIO brilliant boards must be fully supported along their complete length, and kept as flat and level as possible. The ideal method is to transport them in the packing variant in which they were delivered (no repacking recommended).

Storage

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



Protecting packaging units (PU)

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 brilliant must be kept flat, level and fully supported 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.

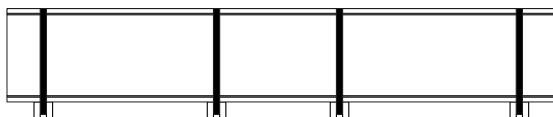


Fig. 03-1 Storage on four battens

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%.

Prior to opening packaging units, boards must be allowed to acclimatise to room temperature for at least 48 hours.

Prior to returning opened or partially used packaging units to storage it must be ensured that the cover plate is replaced on top. This is to prevent contamination and uneven temperature/humidity penetration (due to drafts or heating air), and thus counteract warping effects as well as surface damage.

Storage before and after bonding of the laminate

All materials that are bonded together must be acclimatised for a sufficient amount of time and have the same temperature.

After bonding, panels must be stored immediately in enclosed, heated rooms. Ensure that the storage temperature does not exceed 60 °C.

04 Prerequisites for processing

04.01 Edgeband material

The use of a RAUKANTEX edgeband material is recommended to ensure continuity of appearance between the RAUVISIO brilliant surface and the edges. See chapter "6.5 Edging".

04.02 Processing individual laminates

04.02.01 Substrate

Wooden substrates, lightweight boards or composite material substrates are considered for use as a substrate for RAUVISIO brilliant. In order to meet the high demands on the surface it is critical that the substrate is selected with the intended application in mind. In principle the substrate should be chosen so as to ensure sufficient flatness. Critical for a good appearance is the surface structure of the substrate. A fine surface structure is a prerequisite for an even high-quality surface. An MDF board is recommended as a substrate here. It has a very fine surface structure from which only very small fibres are pulled out during processing (sawing, milling, drilling, adhesion.) By comparison the quantity of fibres pulled out from a chipboard, OSB or plywood panel is much greater leading to the chance that the unevenness will be visible through the laminate thereby "distorting" the surface. With chipboards, particles can fall out of the middle layer, leaving indentations in the laminate. This hazard does not arise when using an MDF substrate.



An MDF substrate board is recommended for a high-quality surface finish.

04.02.02 Adhesive

In addition to selecting the suitable substrate board, selection of the correct adhesive is important to ensure board quality. Single component PU hotmelts have become increasingly common in recent years. These adhesives can be easily applied to the board or substrate using rollers. A short press-down time is usually sufficient to ensure high initial strength. Pressing with a continuous roller lamination system is recommended to ensure a high-quality surface finish.

The hotmelt adhesives react with the humidity/moisture in the material and the temperature. For secure, high-quality bonding, the use of RAUVISIO Flat-Lam PUR is recommended. With matt, non-gloss surfaces, good results have also been achieved with conventional ethylene vinyl acetate (EVA) dispersion adhesives using cycle presses. These should, however, be verified in the actual production conditions. When using other adhesives please contact the adhesive manufacturer with regard to processing recommendations/guarantees.



Ensure adequate adhesion/final strength.

An adhesion strength of approx. 80% is achieved after just a few hours, the adhesive joint takes max. seven days to achieve its final strength.

Checking bonds

Especially with custom applications, the bond must be checked by the customer to ensure compliance with specifications.

04.02.03 Balancing sheet

To ensure a homogeneous board that remains dimensionally stable when exposed to variations of temperature and moisture, a balancing sheet is required.

Generally a symmetrical composition is optimum when it comes to warpage. However, it is not always possible to create a symmetrical design. For this reason other materials may be used for the balancing sheet. Materials such as CPL (Continuous Pressing Laminates) or other polymeric materials may be used depending on application. Based on experience, the REHAU system is based on a symmetrical polymer structure and offers matched, finished components. This system is recommended for in-house pressing. For non-standard applications, such as melamine-coated wooden substrates, tests may be required to verify quality of the complete board. In general, resistance to humidity and warpage cannot be guaranteed in the case of asymmetrically bonded boards (i.e. where a REHAU polymer balancing sheet is not used).

05 Prior to processing

05.01 Unpacking

Before opening the packaging unit, you must allow boards to acclimatise to room temperature for sufficient time – 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. 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.

05.02 Check boards and laminates



Please check the RAUVISIO brilliant system components for the following points before further processing and therefore the finishing of the goods (see chapter "5.4 Documents for material warranty"):

- External damage such as Cracks or marks
- Surface damage or blemishes
- Flatness (when purchasing pressed board)
- Surface tension of the laminate rear side (with purchasing individual laminates)
- Colour consistency within the production batch

The surfaces of RAUVISIO brilliant 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. These cannot be entirely excluded for technical production reasons and do not constitute a direct reason for complaint.

Where an order utilises multiple laminate sheets, it is recommended that only laminate sheets with the same batch number are used. Uniformity of colour across batch numbers must be checked prior to processing.

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



The costs incurred for checking the above-mentioned points cannot be accepted by REHAU. This also applies to consequential costs incurred in the further processing of defective goods.

05.03 Conditioning



RAUVISIO brilliant and all other materials to be processed such as substrate board, adhesive, balancing sheet 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 acclimatisation of all boards/laminate takes place. If there is incomplete acclimatisation of the laminate due to the stack size, the duration should be adjusted accordingly.

05.04 Documents for material warranty

Delivery notes and shipping labels should be retained to aid batch traceability in the event of a technical issue. The inkjet printing on the edge of the substrate board can also be used for the unique identification of a production batch. This must be given to the REHAU sales office in the event of a complaint.

06 Processing RAUVISIO brilliant

06.01 Proper handling of RAUVISIO boards

Placing the boards on the machine table.
Cover the machine table with a clean cover layer (wooden board, cardboard, etc.) or rotate the board so that the protective foil is facing down and the balancing sheet facing up.

Formatting the boards

The nesting process is recommended to cut the boards to size. When formatting with a saw, be sure to observe the instructions for placing the board on the machine table (see above). In this case, use a scorer.

Between the processing steps

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

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

06.02 Preparing the individual laminates

06.02.01 Pre-treatment of the laminates and substrate boards

Manual cutting of the laminate

For manual cutting of the laminate, a blade that cuts through the protective foil and scores the acrylate surface is suitable. The laminate can then be broken at the cut across an edge.

Bonding of the laminate

RAUVISIO brilliant is treated with a Corona pre-treatment on the styrene copolymer underside. This pre-treatment ensures a good bond of the laminate to the adhesive. Due to a high wettability of the surface good adhesion is ensured. The wettability can be established using a test ink. The measurement for this is the surface tension, which is given in the unit [mN/m]. It is known that the surface tension reduces with time. It is therefore recommended that the laminate be processed within one year.

To permit secure adhesion, the surface tension must be more than 38 mN/m. In addition, at the start of each pressing operation, a test sample must be used to test the adhesive wetting of the rear side of the laminate.

After the adhesive hardens, cutting must be carried out in the substrate with laminate removal (flat fibre tears with MDF).

If the surface tension is less than 38 mN/m, the styrene copolymer rear side must be post-treated. This can be done, for example, by way of flaming, corona/plasma treatment or priming.

To avoid damage due to the lamination process, ensure a clean processing environment and sufficient cleaning of the laminates and substrate materials. Here it is important that there are no particles on the laminate and substrate board after cleaning. Foreign objects of this type could leave indentations during the lamination process that are only visible once the protective film has been removed.

06.02.02 Manufacture of the pressed board

The laminate must be placed or fed in lengthwise on to the substrate board. This ensures that the laminate is lying parallel to the board and is not overhanging.

06.02.03 After processing the pressed board

Before onward transport takes place, a rest period/setting time of min. 24 hours must be observed. The setting time should be agreed according to the information from the adhesive manufacturer.

For further processing, it must be checked when the subsequent processing steps can be carried out, depending on the adhesive system and environmental conditions. Refer to the adhesive's product data sheet to do this.

With different colours and adhesives, there may be interactions in terms of the hardening time and adhesion. Before onward processing/shipping, ensure that there is adequate adhesion. This can be evaluated by removing the laminate from the substrate board. All the fibres must be fully pulled from the substrate here.

For picking/storing individual components, it is recommended to protect the surfaces with non-woven material or similar. This will prevent marks being caused on the surface when stacking components.

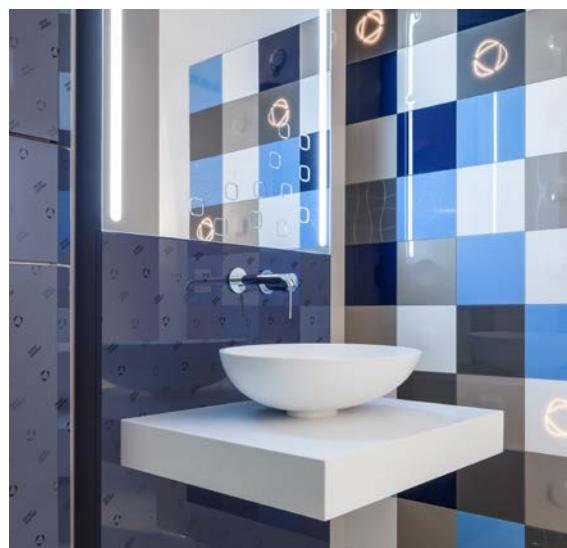


Fig. 06-1 Installation direction

06.03 Mechanical machining of the pressed board

Sawing/milling/drilling

RAUVISIO brilliant can be processed with most approved woodworking tools. When cutting RAUVISIO brilliant, 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. It is recommended that the optimal machine settings are determined by means of trials prior to starting production.

Cutting metal decorative designs to size



When processing metallic decorative designs and intensive colours such as notte, it is to be ensured that the installation direction of all parts is the same as the logo direction on the protective foil. If the element is installed upside down it may be the case that a different optical impression is created due to the alignment of the metal or colour particles.

06.04 Thermoforming of RAUVISIO brilliant

RAUVISIO brilliant and RAUVISIO brilliant SR matt can be thermoformed in the same way as any other thermoplastic material.



This does not apply for RAUVISIO brilliant SR high gloss as the hard coating can crack when exposed to high temperatures or during the thermoforming process.

Care must be taken to ensure that the heat input into the material is not too high – this will result in an “uneven surface”. If the temperature increase 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 application area where the production process must be matched precisely to the laminate.

06.05 Edging

The use of a RAUKANTEX edgeband material is recommended to create a uniform appearance between the RAUVISIO brilliant surface and the narrow surface. The best visual results are achieved by using RAUKANTEX pro. No joint line is visible here thanks to the pigmented polymer functional layer in the edgeband colour. The RAUKANTEX edgeband product range can be supplied to match the surface in the materials ABS (acrylonitrile-butadiene-styrene) or PMMA (polymethylmethacrylate). In this way, particularly with PMMA and ABS edgebands which can be polished, a finished component can be produced with an invisible joint.

The correct processing method is described in the usage instructions Technical delivery specifications sales RAUKANTEX (DML00513). For further information, please contact your REHAU sales office. The resulting component quality (e.g. adhesion of the edgeband, appearance and application properties) depends on the machine settings and the board quality used and must be checked by the fabricator.

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.

Subsequent polishing of the radius can be carried out to achieve a seamless high-gloss finish between the surface and the edgeband.



Fig. 06-2 RAUVISIO brilliant and RAUKANTEX with polished radius



REHAU offers its customers both the standard primed edgeband RAUKANTEX pure and the 100% polymer zero joint edgeband RAUKANTEX pro (formerly RAUKANTEX laser edge).

06.06 The edged component

In addition to pure laminate and large size pressed board, REHAU gives customers the option of using the configurator to purchase customised, laser-edged components from one piece on request.



Fig. 06-3 Laser-edged component

For front applications (nominal dimension 19 mm), a successful certification was carried out in collaboration with TÜV Rheinland in accordance with AMK guidelines.

The certified component is characterised by the following quality features:

- Quality
- Usability
- Regular production monitoring



The configurator for laser-edged components can be found at www.rehau.com/boards

07 Sealing, finish and spot repair

07.01 Finishing and sealing

After removal of the protective film, the surface may be finished using the REHAU sealing kit.

The application of the sealing gives a soft and smooth feel to the surface, and at the same time seals it and makes it less sensitive to mechanical load/scratches.



Fig. 07-1 REHAU sealing kit

The application must be carried out with the sealing sponge and must leave an even film. The excess sealing agent can then be removed without any exposure time using a microfibre cloth.

07.02 Spot repairs, preparation of surfaces after many years of use



This does not apply for RAUVISIO brilliant SR as the hardcoating does not permit grinding/polishing.

It is possible that surface marks which affect the surface may be visible after many years of use, or through improper handling. The innovative structure of RAUVISIO brilliant allows these to be removed through manual or machine grinding and polishing.



It is important that there are no contaminations on the surface, the sealing sponge or the microfibre cloth as they could scratch the surface.

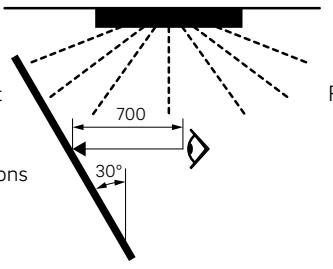
08 Technical data

RAUVISIO brilliant is an acrylic laminate that is made up of a coextruded styrene copolymer and acrylic layer.

The acrylic laminate is designed for furniture/design surfaces that are used in vertical interiors. The acrylic top side is protected by a PE foil, which must only be removed at the installation location.

| Product data | Test standard | Laminate | Symmetrically pressed board with colour-consistent, polymer balancing sheet | Pressed board with white, polymer balancing sheet ¹⁾ | Edged component |
|-----------------------------------|---|-------------------------|---|---|--------------------------|
| Thickness | As per technical drawing based on DIN 438-2 | 0.6–0.8 mm ± 0.05 mm | | | |
| Pressed board MDF substrate 12 mm | As per technical drawing based on DIN 438-2 | | 13.5 mm ± 0.4 mm | | 13.5 mm ± 0.4 mm |
| Pressed board MDF substrate 16 mm | As per technical drawing based on DIN 438-2 | | 17.5 mm ± 0.4 mm | | 17.5 mm ± 0.4 mm |
| Pressed board MDF substrate 17 mm | | | | 17.8 mm ± 0.4 mm | |
| Pressed board MDF substrate 18 mm | As per technical drawing based on DIN 438-2 | | 19.5 mm ± 0.4 mm | | 19.5 mm ± 0.4 mm |
| Pressed board MDF substrate 28 mm | As per technical drawing based on DIN 438-2 | | 29.5 mm ± 0.4 mm | | 29.5 mm ± 0.4 mm |
| Width | As per technical drawing based on DIN 438-2 | 1,300 mm ± 2.0 mm | 1,300 mm ± 2.0 mm | 1,300 mm ± 2.0 mm | Dimension ± 0.5 mm |
| Length | As per technical drawing based on DIN 438-2 | 2,800 mm ± 5.0 mm | 2,800 mm ± 5.0 mm | 2,800 mm ± 5.0 mm | Dimension ± 0.5 mm |
| Angle deviation | As per technical drawing based on DIN 438-2 | 90° ± 0.3° | 90° ± 0.3° | 90° ± 0.3° | Max. 0.5 mm/ 1,000 mm |
| Edge defects | As per technical drawing based on DIN 438-2 | 15 mm | 15 mm | 15 mm | |

¹⁾ No guarantee for component tests in accordance with AMK, however resistant to temperatures of up to 50 °C in accordance with AMK-MB-001; no certification in accordance with TÜV; no PEFC certification

| Visual properties | Test standard | Requirements | Test result |
|---------------------|---|---|---|
| Surface gloss level | AMK-MB-009, 09/2010 | Measurement with 60° measurement geometry ≥ 85 GLE high gloss <6 GLE matt | |
| Colour | AMK-MB-009, 09/2010 | No significant change to the limit sample; even covering properties | Fulfilled |
| Surface | AMK-MB-009, 09/2010 following EN ISO 7823-2* | 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. |  Fulfilled |
| 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 |

* This standard refers exclusively to the extrusion process step; downstream process steps are not taken into account.

| Material properties of the layer material | Test standard | Requirement |
|---|---|------------------------|
| Density (acrylic laminate) | DIN EN ISO 1183-1 (05.04) | 1.06 g/cm ³ |
| Fire behaviour | DIN 4102/1 | B2 |
| Material purity/sand content | Residue on ignition according to test specification | ≤ 1% |

| Surface properties of the coating material | Test standard | Requirements | Test result | | | |
|--|---------------------------------|--|---|--|---|---|
| Surface tension Adhesive side | Check with test ink | ≥ 44 mN/m upon delivery | ≥ 38 mN/m during bonding | | | |
| Chemical resistance* | DIN 68861/T1 | 1A/1B | See "Substances" table on page 21 | | | |
| Performance in dry heat | DIN 68861/T7 | Stress group min. 7 D | No change at 70 °C | | | |
| Behaviour in moist heat | DIN 68861/T8 | Stress group min. 8 B | No change at 70 °C | | | |
| Performance in water vapour | DIN EN 438-2 | Level 5 | | | | |
| Scratch-resistance | | | RAUVISIO brilliant | RAUVISIO brilliant SR gloss | RAUVISIO brilliant SR matt | RAUVISIO brilliant noble matt |
| | DIN 68861/T4 | | Class 4D | Class 4D | Class 4B | Class 4D |
| Micro-scratch resistance | DIN CEN TS 16611 Procedure A | | Class 4 | Change in gloss level 5% (measurement with 60° geometry) | Change in gloss level 18% (measurement with 60° geometry) | Change in gloss level 11% (measurement with 60° geometry) |
| | DIN CEN TS 16611 Procedure B | | Class 2 | Class 5 | Class 5 | Class 3 |
| Antibacterial action in RAUVISIO brilliant noble matt | JIS Z 2801:2012 ISO 22196 | Antibacterial activity of Escherichia coli and Staphylococcus aureus | ≥ 4 log reduction ≥ 99.99% reduction | | | |

* The testing of the chemical resistance to DIN 68861-1 includes the substances given in the table on page 19, other substances have not been tested specifically and are to be tested by the customer separately.

Component tests on the edged component

The delivery contents from REHAU includes the RAUVISIO brilliant with and without edging. The details below refer to the finished, edged component with RAUKANTEX pro. Please note that REHAU only accepts warranty liability for its scope of supply as per the REHAU specification, not for the finished, edged component. The results of the component tests on the finished, edged component are dependent on the machine and process parameters to be set by the customer for

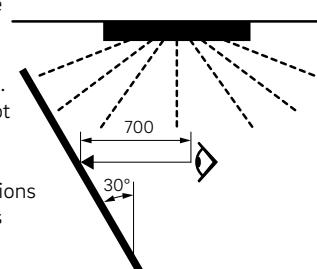
processing RAUVISIO brilliant, using the suitable edgeband as well as full compliance with the REHAU processing instructions in accordance with this Technical Information. REHAU Applications Engineering Department provides appropriate support for the setting of machine and process parameters. Please note that our consultation in application technique is correct to the best of our knowledge, but we cannot accept any liability for this free service, which is provided without obligation.

| Component tests | Test standard | Test result |
|--------------------------------------|--|-------------|
| Temperature resistance | Assessment to AMK-MB-001 (05/03) | Passed |
| Infiltration of water vapour | Assessment to AMK-MB-005 (07/2007), Module 1 | Passed |
| Humid climate resistance | Assessment to AMK-MB-005 (07/2007), Module 2 | Passed |
| Alternating climate resistance | Assessment to AMK-MB-005 (07/2007), Module 3 | Passed |
| Long-term heat storage 4 weeks 50 °C | Assessment after 24h acclimatisation | Passed |

Technical data RAUVISIO brilliant balancing sheet

The balancing sheet matched in colour to RAUVISIO brilliant consists of coextruded polymer that has a fine embossing. The balancing sheet is designed for the reverse of furniture/design surfaces that are used in vertical interiors.

| Product data | Test standard | Dimensions |
|-----------------|--|----------------------|
| Thickness | Assessment according to AMK-MB-001 (05/03) | 0.6–0.7 mm ± 0.05 mm |
| Width | Assessment according to AMK-MB-005 (07/2007), module 1 | 1,300 mm ± 2.0 mm |
| Length | Assessment according to AMK-MB-005 (07/2007), module 2 | 2,800 mm ± 5.0 mm |
| Angle deviation | Assessment according to AMK-MB-005 (07/2007), module 3 | 90° ± 0.3° |

| Visual properties | Test standard | Requirements | Test result |
|-------------------|---------------------|---|---|
| Colour | | | No significant change to the limit sample; even covering properties |
| Surface | AMK-MB-009, 09/2010 | 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. |  Fulfilled |

| Material properties | Test standard | Requirement |
|------------------------------|---|-------------|
| Fire behaviour | DIN 4102/1 | B 2 |
| Material purity/sand content | Residue on ignition according to test specification | ≤ 1% |

| Surface properties | Test standard | Requirements | Test result |
|-------------------------------|------------------------|-----------------------|-------------------------|
| Surface tension adhesive side | Testing using test ink | ≥ 44 mN/m on delivery | ≥ 38 mN/m during gluing |
| Behaviour in dry heat | DIN 68861/T7 | Stress group min. 7 D | No change at 70 °C |
| Behaviour in moist heat | DIN 68861/T8 | Stress group min. 8 B | No change at 70 °C |
| Behaviour in water vapour | DIN 438-2 | Level 5 | |
| Scratch-resistance | DIN 68861/T4 | Class 4B | |

09 Installation guidelines

1. The raw laminate and preassembled elements should only be transported on the original packaging unit.
2. Always unload packaging units sideways and from the middle.
3. The raw laminate and fabricated elements should always be stored on the original pallet or with 4-timber storage.
4. The raw laminate and fabricated elements must not be stored outside or in damp rooms.
5. Raw laminates and fabricated elements should always be stored appropriately at the installation location and not exposed to strong UV light sources.
6. Acclimatise preassembled elements 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 preassembled elements as these could cause damage.
8. RAUVISIO brilliant 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 installation.
14. In the case of wooden substrate boards, all cut edges and raw board edges must be sealed so that they are watertight.
15. All drilled holes in the wooden substrate boards 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. 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 brilliant elements.
20. Installation for indoor vertical applications only.



National standards, specifications, legislation, operating instructions (e.g. electronic devices) or similar must be observed.

10 Care and usage instructions for the end user



The non-porous, homogeneous acrylic surface material is easy to clean and suitable for contact with foodstuffs and is resistant to fungal and bacterial growth.



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



RAUVISIO brilliant is pleasant to the touch, warm and has an excellent visual depth effect.

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

Chemical resistance

| 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 |

The table shows the media tested and the exposure time:

| Substances | RAUVISIO brilliant | | Stress group 1A/1B | | RAUVISIO brilliant SR matt | |
|--------------------|--------------------|--------|--------------------|--------|----------------------------|--------|
| | D | Result | D | Result | D | Result |
| Acetic acid | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Citric acid | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Ammonia water | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Ethyl alcohol | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Red wine | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Beer | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Cola | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Coffee | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Black tea | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Blackcurrant juice | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Evaporated milk | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Water | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Petrol | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Acetone | 16 h | 1 | 10 s | 5 | 10 s | 5 |
| Ethyl-butylacetate | 16 h | 1 | 10 s | 5 | 10 s | 5 |
| Butter | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Olive oil | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Mustard | 16 h | 4 | 16 h | 4 | 16 h | 4 |
| Onion | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Disinfectants | 16 h | 3-4 | 16 h | 5 | 16 h | 5 |
| Cleaning agent | 16 h | 5 | 16 h | 5 | 16 h | 5 |
| Cleaning solution | 16 h | 5 | 16 h | 5 | 16 h | 5 |

D = Exposure time; A = Requirement as classification code according to DIN EN 12720:2009-07



No scouring or alcoholic cleaning agents must be used for cleaning, there is a risk that these will attack and damage the surface. Heavy dirt must be removed with a soft cloth (microfibre cloth) and soapy water; you will then be able to restore the high quality appearance using the REHAU sealing agent.

This specially matched sealing agent improves the feel and protects the surface during day-to-day use, so you will certainly get long-term enjoyment from your exclusive acrylic surface.



Fig. 10-1 REHAU sealing kit



Sealing should be avoided in RAUVISIO brilliant SR matt as an uneven application can result in a non-homogeneous appearance.



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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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