

PROCESSING INSTRUCTIONS

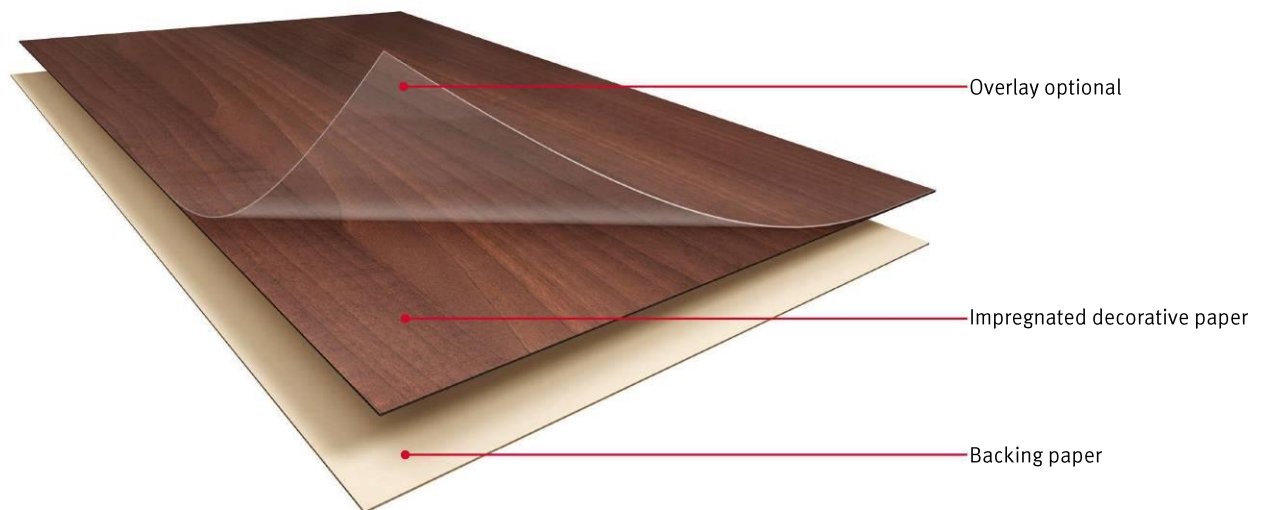
EGGER LAMINATE MICRO



EGGER Laminate Micro is a decorative laminate based on curable resins. EGGER Laminate Micro is constructed by fusing multiple layers and consists of melamine resin impregnated decor paper and a bondable reverse. These multiple layers are pressed together by means of high pressure and heat. The qualities of resins and papers, the surface texture, the use of special overlays as well as the press parameters during production determine the quality of the laminate and ultimately the field or area of application for which it is suitable.

For detailed information please refer to the technical data sheet “EGGER Laminate Micro”.

Composition of “EGGER Laminate Micro”



1. Uses / Areas of application

EGGER laminate Micro is only suitable for reel-fed lamination or wrapping processes. The thin laminate is supplied in rolls and is available in nominal thicknesses of 0.15 or 2.0 mm. EGGER laminate Micro may only be bonded to substrates directly off the roll.

EGGER laminate Micro is especially suitable for the lamination of flat surfaces of products such as door leaves, door casings and frames as well as for postformed front elements and window sills, involving a downstream forming process. It also lends itself to wrapping processes for decorative trims and profiles as well as cornices and lighting pelmets. A decor matched surface can therefore be achieved on a large variety of different components.

2. Packaging / Storage

EGGER laminate Micro is supplied in the form of rolls which are placed on pallets either horizontally (see illustration 1) or vertically (see illustration 2) if so required by the customer. Suitable protection is provided on the individual roll ends and the surface areas are covered with protective foil.

It is important to store the product in dry areas. Temperatures of approximately 18 °C to 20 °C and a relative humidity of approximately 55 % to 65 % provide ideal storage conditions. The room temperature and relative humidity influence the deformation properties when the product is stored for longer periods of time. The foil-wrapped factory packaging ensures that constant humidity is maintained within the laminate reel and allows future storage under ideal condition. Avoid exposure to direct sunlight.



Illustration 1



Illustration 2

3. Fabrication

3.1 CONDITIONING

Before processing, both, the substrate and the EGGER Laminate Micro should be conditioned under normal climatic conditions, (approximately 20 °C and a relative humidity of approximately 55 % to 65 %), so that both materials are at equilibrium of moisture content. Materials that are processed when they are too moist tend to shrink over time, which may lead to cracks and warpage.

3.2 HANDLING

Prior to fabrication, check the EGGER laminate for any obvious damage after removing the packaging. Any person involved in transporting or handling laminates should wear personal safety equipment such as gloves, safety shoes and suitable work wear, etc. Depending on the specified laminate roll length, – standard: 200 , 400, 600 and 800 m – reels of laminate in 1,300 mm width can achieve a weight of ~ 70 kg up to ~ 280 kg. In view of these substantial weights, automated handling with lifting and / or craning equipment is essential.

3.3 BONDING

EGGER laminate Micro can be used for laminating or wrapping classic particle board materials such as chipboard, MDF and HDF as well as PVC substrates. Solid wood is not suitable as a coreboard; dimensional changes caused by fluctuations in the ambient conditions can lead to cracks or waves in the laminate surface.

Wood based materials such as blockboard and veneer plywood require special attention as they consist of veneers and / or solid wood and do not reach the same homogeneity as chipboard. In-house press tests to establish suitability should be carried out prior to going into full scale production. This is especially important when thin laminates are applied, inasmuch as irregularities in the substrate surface tend to become more noticeable. Furthermore, in fluctuating climatic conditions, the veneer and / or solid wood constituents of blockboard and veneer plywood do not reach the same uniformity in terms of dimensional changes as can be expected of wood chip based particle boards.

However, a flat and tension-free substrate is a prerequisite for an even surface, necessitating therefore that a substrate calibration as well as a wood moisture content check (internal application 6 to 8 %) be carried out. Materials that are processed when they are too moist tend to shrink over time and this can lead to cracks and warpage. When using Multiplex boards, preference should be given to veneer plywood made of relatively soft woods (e.g. poplar, birch, okoume, abachi). Similarly, blockboards should consist of narrow strips with a softwood surface layer to prevent surface irregularities. The substrate must be tension-free and the surface must be flat and even.

Both, the laminate and substrate must always be cleaned thoroughly before bonding. The materials must be free from dust, grease, oil or perspiration marks before the adhesive is applied. The laminate is bonded or pressed using automated lamination and / or profile wrapping lines. EGGER laminate Micro can be bonded solely in reel-fed lamination lines using conventional urea resin glue and dispersion adhesives, as well as profile wrapping machines using polyolefin or polyurethane hot melt adhesives. The following criteria influence the bonding process:

- Type and quality of substrate
- Adhesive / glue system
- Processing conditions

It is therefore always recommended to carry out bonding trials under local conditions.

Please observe the information provided by the respective glue manufacturer.

3.4 FABRICATION

Due to the thin laminate thickness, EGGER laminate Micro can only be supplied in rolls and fabricated on reel-fed machinery. Regardless of whether the substrate is wood based or PVC, the correct combination of glue system and production equipment will ensure that this laminate quality can be processed without difficulty. For processing, special automated production equipment is required. 3D deformation using compression moulding as well as processing in membrane presses is not possible. Surface gluing requires a lamination line, while chipboard presses are not suitable. We recommend laminate Micro with a nominal thickness of 0.15 mm for use in lamination lines. For lining that can be performed after surface lamination, the deformation temperature of the laminate is approximately 100 °C (-10°C / +30°C) measured on the laminate. Depending on the profile and length of the pressure zone, the deformation temperature has to be kept constant with the application of hot air. Radii of ≥ 3 mm are possible, depending on the laminate thickness and profile geometry. In view of the large number of machinery suppliers on the market and the many different plant configurations on offer, the illustrations below depict only a few examples.

→ Illustration 3 - 6 show plant and equipment by Friz Kaschieretechnik GmbH, Im Holderbusch 7, 74189 Weinsberg, Germany



Illustration 3
Machine Type: PROFI FKP 150/1/13/DH/R
Application: CPL lamination of doors, including wrapping zone



Illustration 4
Machine Type: OPTIMAT FKP 100/1/10/DH/R
Application: CPL lamination of doors, including extended wrapping zone.

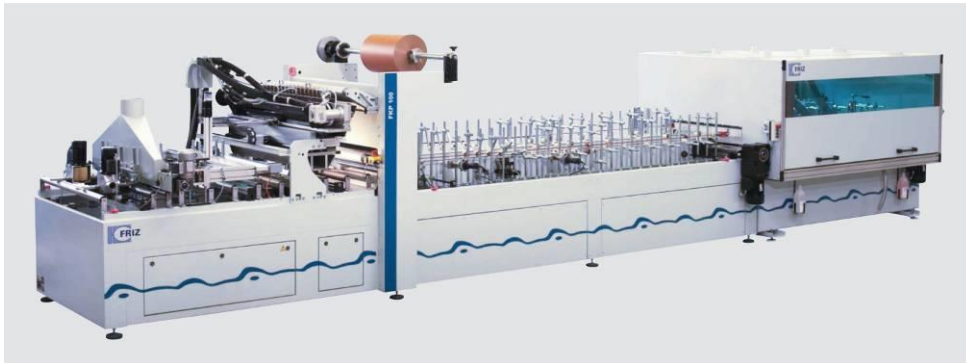


Illustration 5

Machine Type: OPTIMAT FKP 100

Application: CPL lamination of doors, including extended wrapping zone and downstream finishing



Illustration 6

Detailed view: Wrapping zone in OPTIMAT PUM 120 – door frame component

→ Illustrations 7 shows equipment by R. Bürkle GmbH . Gewerbestr. 5 . 33397 Rietberg-Mastholte . Germany



Illustration 7

Detailed view: glue application equipment

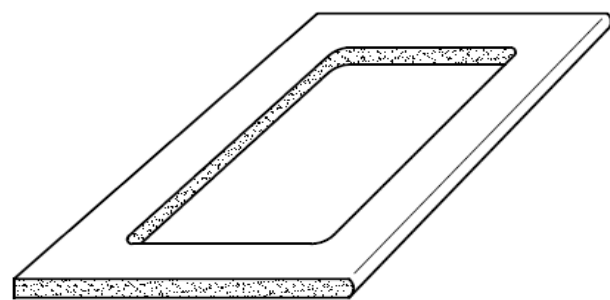
Always observe the instructions provided by the respective machinery supplier.

4. General processing instructions

4.1 CUT-OUTS

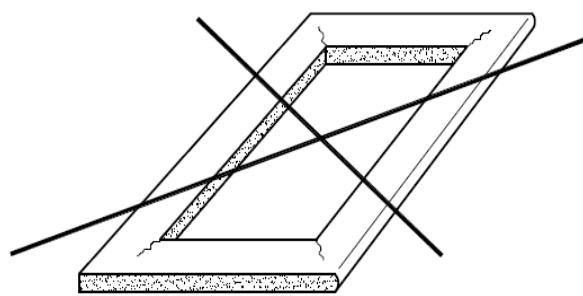
Cut-outs are not usually made until after the laminate has been bonded to a carrier substrate, i.e. they are sawn out on so-called laminated composite panels. Before processing, always ensure that the laminated composite panel is supported securely so that the sawing, routing or drilling work is not likely to cause any damage. In particular, narrow board areas surrounding apertures can break or crack if the board is inappropriately handled during processing. The board cut-outs should also be secured so that they cannot break or fall out in an uncontrolled way and thereby cause injury to individuals or damage property. Cut-out edges **should always be radiused** (minimum radius ≥ 5 mm) as sharp edges have an adverse effect on the material and can lead to crack formation.

The cut-outs should preferably be made using a portable hand-held router or CNC milling machine. When using jigsaws, the cut-out corners should be pre-drilled with an appropriate radius and the cut-out sawn out from radius to radius (**Illustration 8 + 9**). The cut should always be made from the underside of the board to prevent chipping of the laminate. The edges should always be finished with sandpaper, fine files or hand-held milling machines to eliminate the formation of notch cracks as a result of break-outs.

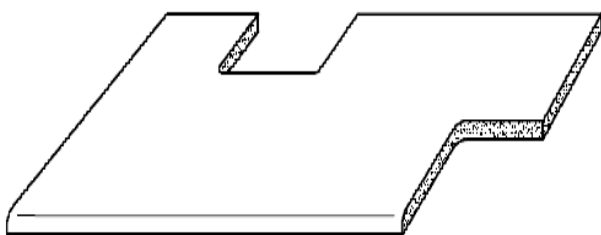


Correct!

Illustration 8

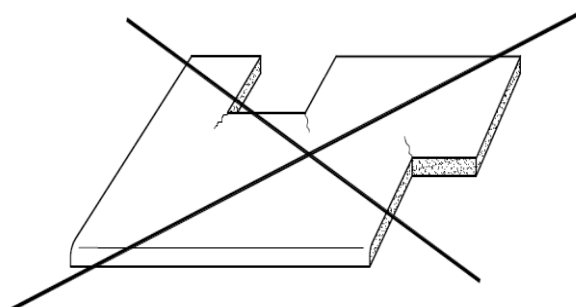


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Correct!

Illustration 9



Incorrect!

4.2 SEALING OF CUT EDGES

In general terms, laminated composite elements, such as window sills, front elements etc., are effectively protected from moisture ingress by the laminate surface. However, moisture and damp can still reach the substrate, via unprotected edges such as cut-outs, straight joints and mitre joints, long back edges, drill holes, screw holes and fixtures. For horizontal applications in particular (window sills), it is essential to carry out the necessary sealing work in the final installation. EGGER melamine edging or EGGER Edging ABS (thermoplastic edge banding) are the best products for sealing visible exposed edges. Sealing profiles and self-curing sealants such as silicon rubber, polyurethane and acrylic have proved to be the best products for sealing concealed cut edges. When using sealants, it is also essential to use a primer; either a film-forming one or a cleaning primer depending on the material.

Always follow the manufacturer's instructions carefully when using these materials.

Apply the sealant leaving no gaps or holes and then smooth over with water and detergent. Mask off areas near joints to prevent soiling of the surface. Any pipes or leads that are to be brought up through the worktop should be centred with a minimum distance of 2 to 3 mm on either side and carefully sealed (see illustration 10).

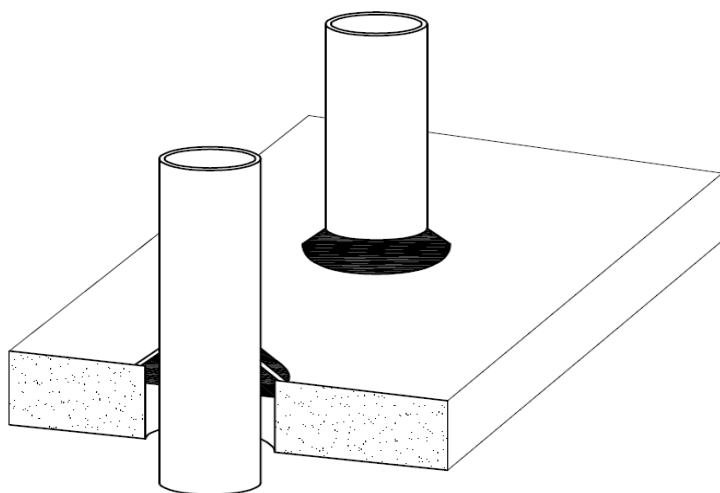


Illustration 10

Cut edges can also be sealed using a two-part lacquer or two-part adhesive. Manufacturers supply sealing rings, profiles or collars with attachments such as mixer taps, sinks and hobs. Always follow the manufacturer's instructions when fitting these items.

4.3 ANCHORING

If fittings are to be attached to the laminated composite elements, it is essential to ensure that the laminate is predrilled in the screw or press-fit fastening area. The holes must be at least 1mm larger than the screw diameter to prevent tension build-up in the material (see illustration 10). On horizontal surfaces it is also recommended to protect the inside of the screw hole with sealant before fixing the screw.

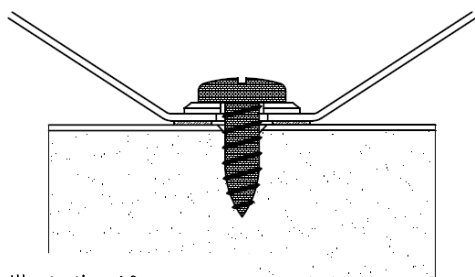


Illustration 10

5. Quality characteristics / technical data

EGGER Laminate Micro fulfils the high EGGER quality standard as well as current applicable Standards and regulations. EGGER Laminate Micro is tested in accordance with EN 438-2:2005 to quality requirements as stated in the Technical Data Sheet "EGGER Laminate Micro".

6. Maintenance and cleaning recommendations

Thanks to their resistant, hygienic and dense surface EGGER Laminates do not need special care. As a general rule, dirt and spilled substances such as tea, coffee, wine etc. should be cleaned immediately as the cleaning effort increases if they are left to dry. When necessary, cleaning should be done with non-aggressive agents. Cleaning agents must in particular not contain any abrasive components, as they may adversely affect the gloss level or scratch the surface. Due to everything from light and fresh to severe and stubborn stains being possible in daily use, which are caused by the most varied substances, correct cleaning is an important matter.

The following instructions should be observed in daily use:



Placing burning cigarettes on the laminate surface leads to surface damage. **Always use an ashtray.**



Laminate surfaces should not be used as a cutting surface as this can also leave cutting marks on highly resistant laminate surfaces. **Always use a chopping board.**



Placing hot cooking utensils such as saucepans and frying pans directly from the hob or oven onto the laminate surface should be avoided, as, depending on the heat exposure, a change in the gloss appearance or damage to the surface can arise. **Always use heat resistant mats.**



Spilled liquids should always be cleaned up immediately, especially in the areas around cut-outs and joints as prolonged exposure to some substances may cause a change in the gloss appearance of the laminate surface.

These recommendations apply especially to matt laminate surfaces. These have a distinctive look and feel, but also a greater tendency to show wear and tear.

More detailed information can be found in our leaflets:

- EGGER Laminate Structure ST9 Perfect Matt
- EGGER Laminate Cleaning and Maintenance instructions
- EGGER Laminate with Protective Foil
- EGGER Pearlescent Laminate

These processing instructions have been carefully drawn up to the best of our knowledge. The information provided is based on practical experience as well as in-house tests and reflects our current state of knowledge. It is intended for information only and does not constitute a guarantee in terms of product properties or suitability for specific applications. We accept no liability for any mistakes, errors in standards or printing errors. The continuous development of EGGER Laminates might result in differences, as well as renewals of standards and documents of public law. The contents of these processing instructions should therefore not be considered as instructions for use or as legally binding. Unless otherwise stated, our General Terms and Conditions apply.